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Common Lesions
Of the Vulva*

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While readily accessible for examination, the vulva comprises a portion of the body with a great variety of pathologic lesions, many of which are difficult of accurate diagnosis. The reason for this is that on the one hand the vulva is a portion of the integument and hence subject to almost every conceivable form of skin disease, and on the other hand, it is a portion of the genital tract with all the physiologic and pathologic processes attendant upon puberty, sexual relations, childbirth, and the menopause. It thus occupies a border-line position between the field of the dermatologist and the gynecologist. The literature upon diseases of the vulva is to be found in the journals of both these specialties, and correct diagnosis and appropriate treatment cannot be given unless both fields are studied.

Anatomic Peculiarities

Certain anatomic peculiarities should be stressed. There is usually a heavy growth of hair covering the entire mons veneris, and all but the inner aspect of both labia majora. The skin of the prepuce, the inner surface of the labia majora, the entire labia minora and the perineum are almost wholly free of any hair, but are plentifully supplied with sebaceous glands. These glands, together with the numerous sweat glands found over the entire vulvar skin, including the crural folds, produces a moisture favorable for bacterial growth. The sheltered position of the vulva between the thighs, the passage of urine over the surface, and the proximity to the anus, add further to this moisture and bacterial contamination.

A third type of epithelial covering is found in that portion of the vulva known as the vestibulum vaginæ, situated between the inner edge of the labia minora and the hymeneal ring, including the peri-urethral area above and the fourchette below. This area has a pinkish color, contains few glands, and exudes a moisture similar to that of mucous membranes. The epithelium here is much thinner and more delicate, hence is more readily abraded by any trauma and more sensitive to infection.

Finally, we have as important sub-epithelial structures the erectile body known as the clitoris, subject to sexual influences, and the two laterally placed racemose glands, named after Bartholin, that secrete quantities of mucous and may permit entrance of infection through their ducts.

The blood and nerve supply of the vulvæ come largely from the lower lateral corners around the tuber ischii as the pudic trunks, and ramify upwards and inwards toward the clitoris. The lymph channels on the other hand do just the opposite. They start from the anus and inner labia, passing upwards and outwards to form larger trunks that drain into the femoral and inguinal lymph glands, situated in the groin

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(Fig. 1). As will be evident from a subsequent discussion of certain diseases, these anatomic considerations are vital for a proper understanding of diagnosis and treatment.

The common diseases of the vulva chosen for discussion are the following:

1. **Furunculosis.**
2. **Leukoplakic vulvitis, and other forms of vulvar pruritus.**
3. **Syphilis of the vulva.**
4. **Chronic hypertrophic ulcerative vulvitis (a hydra-headed monster).**
5. **Carcinoma of the vulva.**

Furunculosis

1. *Furunculosis* of the vulva, which is discussed very cursorily in most textbooks on gynecology, is of relatively frequent occurrence. The number of patients I have seen in recent years raised the suspicion that the modern aseptic gauze pads worn at menstruation, often quite irritating to the skin, may be a factor in this increased incidence of furunculosis. At any rate, this disease may be very painful and prolonged. The old saying, "If you have one boil, you will have seven," is often true. It is not uncommon for the boils to appear in other areas, such as the armpits, the gluteal regions, and the eyelids. The infection, due to the staphylococcus, gains an entry along the roots of the hair-follicles as a rule. The tendency for a recurrence of these boils is so universal that every possible measure should be taken to prevent the spread of infectious material and increase the resistance of the tissues and the individual as a whole to further inoculation. The usual site is in the hairy surface of the labia majora where they may form an abscess of considerable size with edema and surrounding cellulitis. Even before the first boil has broken down a second may be forming on the opposite side. The pain is so considerable that the patient can, with difficulty, keep active on her feet.

The treatment of furunculosis consists of incision of the boils, when ripe, and the prevention of a recurrence. It is important that all manipulations are extremely gentle, and that a cross incision is made to provide ample drainage. Squeezing of the tissues is dangerous. The prevention of a recurrence may be divided into local and general measures.

Local measures consist of shaving the entire vulva, and keeping the vulvar skin as dry and aseptic as possible. The patient should stay off her feet as much as possible, lying with her legs apart so as to promote drying. The parts should be cleaned first with boric acid cotton sponges, followed by a thorough application of 50 per cent alcohol over the entire surface, and then lightly dusting the surface with talcum powder.

Soap, heat and stronger antiseptics are harmful.

Since some of these cases are associated with diabetes, a urinalysis should be made and if sugar is found, the diet must be regulated accordingly. Of considerable value is building up the patient's resistance by a diet rich in vitamins. Whenever, in spite of these local and general measures, boils recur, I have found definite value in giving staphylococcus vaccine hypodermically every three days in increasing doses for a period of a month, or even longer. Autogenous vaccines, owing to frequent contamination with colon bacilli, are often not so effective.

Leukoplakic Vulvitis

2. *Leukoplakic vulvitis* is a disease found primarily in women at or beyond the menopause, although in about ten per cent the age may be between 16 and 40 years. In one of my patients the disease started at the age of 17. The term kraurosis has been widely employed for this disease, but should more properly be limited to those cases of leukoplakic vulvitis in which there is complete flattening of both labia and constriction of the vaginal orifice.

Types.—In general, we may distinguish two types of this disease and two stages. The first and most common is the *symmetrical or generalized type.* Here the area involved is either the entire non-hairy portion of the vulvar skin including the perineum and often the peri-anal tissues well back to the level of the coccyx, or in symmetrical form a portion of this area such as the tissues around the prepuce, or the perineo-anal region. The other type of leukoplakic vulvitis is the *unilateral,* in which an irregularly ovoid area is involved by the pathological process on one of the labia.

Stages.—The two stages of the disease are: (1) the early or hypertrophic and (2) the late or atrophic. In the former there is edema, some sclerosis, and a greyish-white color; the labia minora are shortened but still visible as definite ridges. Microscopically the epidermis shows marked acanthosis, epithelial prolongations and but little increase in keratin. In the late or atrophic stage the skin has become parchment-like, white in color, with many crackles and abrasions due to its lack of elasticity. The labia minora are usually flattened and there is marked dryness (Fig. 2).

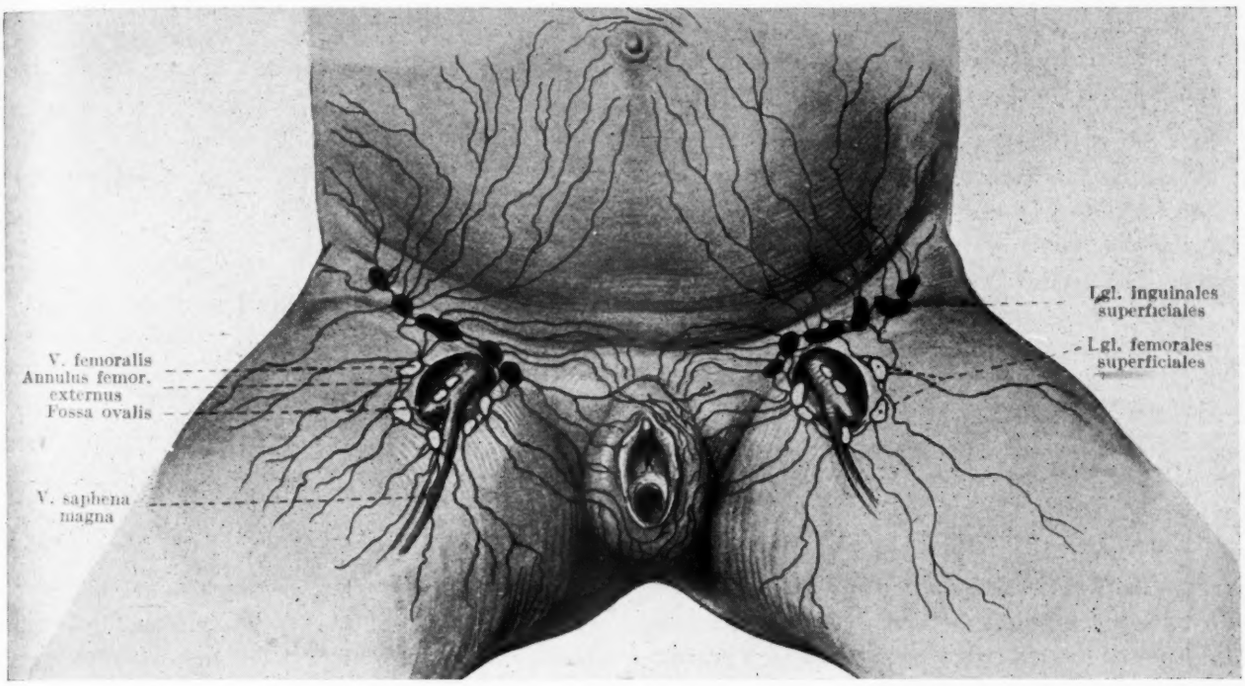

Fig. 1. Anatomic distribution of lymphatic drainage from the vulva (Kehrer).

There are, however, cases that cannot be so easily classified. We may at the very start have a dry, atrophic vulvar skin with flattened labia minora, dusky-red in color with but a small patch of leukoplakic skin around the prepuce or over the perineum.

In four out of five cases there is considerable pruritus, at times so pronounced as to lead to intractable loss of sleep and melancholia. Where pruritus is a minor symptom, there is a feeling of burning and tightness. Many of these women have tried a variety of salves and lotions before consulting a physician. The pruritus leads to scratching and the abrasions thus produced cause localized infection with increased burning and itching. It is thus a vicious circle that leads from bad to worse.

Treatment.—Treatment of leukoplakic vulvitis should in almost every instance consist of a complete vulvectomy, often including a triangular flap of skin back of the anus. Less radical measures lead to failure. Injection of ovarian sex hormone may give temporary relief, as will, at times, a course of x-ray treatments. The latter, however, has serious dangers owing to the tendency to burns that aggravate the disease. Sympathectomy has been recommended, but relief after this operation rarely lasts more than two years. In my experience in over 75 cases, a majority of which have been followed for 5 to 20 years, the percentage of failures with vulvectomy is extremely small. There is at times a feeling of tightness and a few recurrent patches of leukoplakia are readily removable by superficial cautery. Occasionally after a complete vulvectomy, the peri-anal skin which previously had shown no pathology, develops leukoplakic changes necessitating a second plastic removal. On the whole, vulvectomy, if properly done, is preferable to the more serious operation of sympathectomy. It has the further advantage of removing what may fairly be called a precancerous skin, for it has been established that carcinoma will develop in from 40 to 50 per cent of leukoplakias.

Pruritis Vulvæ.—In connection with leukoplakic vulvitis, a brief discussion of the broader subject of *pruritus vulvæ et ani* is in order. This nonleukoplakic pruritus is one of the bug-bears of the gynecologist.

It is really a symptom rather than a disease, and the factors producing it are more often somatic than local.

We do, of course, find pronounced pruritus associated with mycotic, gonorrheal and trichomonas vaginitis. Here the correction of the vaginal discharge brings complete and prompt relief.

Generalized pruritus is, of course, characteristic of certain disturbances of the biliary passages, but usually the itching is not localized to the vulva. Dietary excesses, the ingestion of larger amounts of meat, fats, greasy foods, spices, salt, coffee or alcohol, may in certain individuals predispose to pruritus of the vulva and anus. Whether toxic or allergic factors are predominant in causing this condition is not clear, but it has been amply proven that in some cases the pruritus can be cured by a prolonged restriction of these articles of food from the diet. Endocrine disturbances, especially the hypofunction of the ovaries at menopause or their operative removal before that time, may lead to pruritus, so that the hypodermic administration of 50,000 to 100,000 international units of female sex hormone is often indicated and may give considerable relief.

Above all, we should keep in mind the possibility of psychoneurotic causes at the root of this disease. E. Kehrer greatly emphasizes this etiologic factor. I agree with him that in about two-thirds of the cases careful analysis will reveal a prolonged mental upset preceding the pruritus. Often sex relations are responsible. In every case a thorough psychoanalysis should be made.

The physical changes in simple pruritus are relatively minor. At first nothing can be noted except moderate swelling and increased redness of the labia. Later the skin assumes a leaden color and a thick leathery consistency, with scratch-marks and minor infected sores. Local treatment is helpful, but temporary in its effect. An ointment of 5 per cent anesthesin in a mixture of lanolin and zinc oxide ointment has been the best in my experience. Injection of 10 c.c. of a 1 per cent novocain solution in saline into the tissues surrounding the pudic nerve at its entrance into the vulva near the tuber ischii gives relief for a few days, as will a para-sacral injection. All these are temporary measures. Resection of the pudic nerves and its branches is technically difficult and unsuccessful as a rule. Vulvectomy is equally ineffective as a permanent cure. In intractable cases a peri-aortic sympathectomy has been successful in the hands of some men, but I have no personal experience in this field.

All in all, the best results have been obtained by a consideration of etiologic factors, a correction of dietary régime, and above all, an elimination of faulty sexual habits, with emphasis on exercise and an out-door life to lower sex activity.

Syphilis

3. *Syphilis* of the vulva is probably the most common of all lesions. The external genitals are usually the port of entry of this disease in woman and yet in spite of the frequency of this infection the injury to the tissues is usually so slight as frequently to be overlooked. We are struck with the rarity of any record of a genital sore in women with positive Wassermann reactions. The typical Hunterian chancre has, however, a characteristic appearance. It is often located in the inner aspect of the labium majus near the fourchette, a flat ulcer with cartilagenous edge, and marked edema of the surrounding tissues. In fact, unilateral edema of the vulva should always demand a careful search for such an ulcer as its possible cause. The secondary eruption of syphilis manifests itself in mucous patches, multiple, superficial, grey-based ulcers, 3 to 5 mm. in diameter, situated about the vestibulum vaginæ, or flat plateau-like moist excrescences, the condylomata lata, found most often over the perineo-anal region.

It is only the tertiary lesions of syphilis that produce destructive changes. Pustular lesions are infrequent. Gummatous deposits with ulceration appear primarily at two points: (1) the inner margins of the urethra; (2) the fourchette. The urethra, especially in the negro race, may be so indurated and destroyed that it opens up and looks like a bilaterally lacerated cervix. The

tertiary ulcers about the fourchette may almost encircle the vaginal orifice and penetrate into the rectum, producing a recto-perineal or recto-vaginal fistula. There is much indurative hypertrophy of the labia and formation of peri-rectal tags in the later stages of tertiary lues. These tertiary ulcers rarely cause bleeding, only a foul sero-purulent discharge. They are not friable, have indurated edges and abundant scar tissue is present from old healed ulcers.

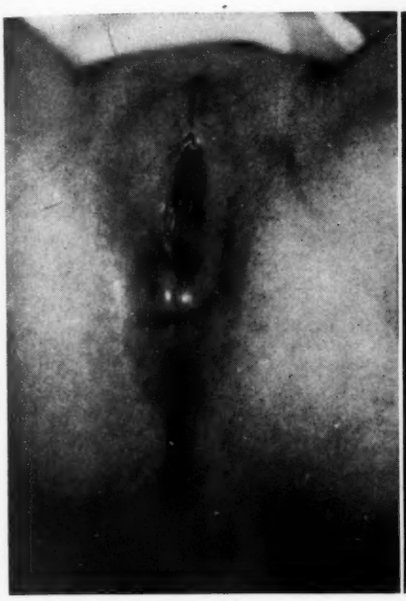

Fig. 2. Leukoplakic vulvitis.

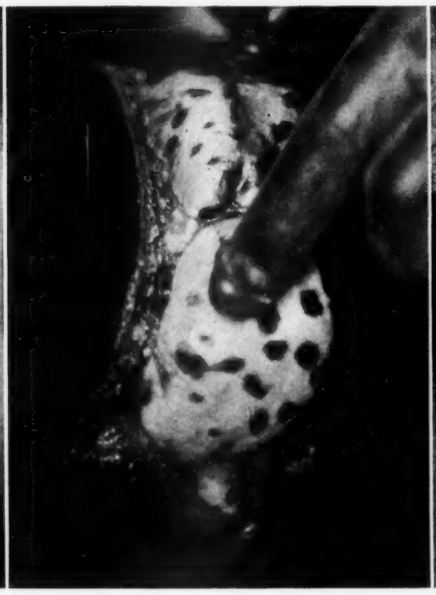

Fig. 3. Chronic hypertrophic ulcerative vulvitis.

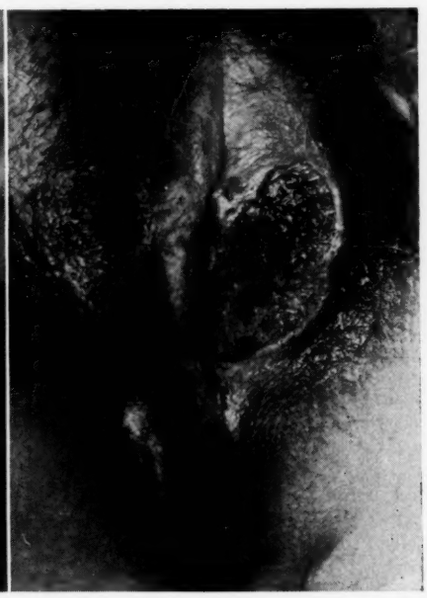

Fig. 4. Carcinoma of the vulva.

Chronic Hypertrophic Ulcerative Vulvitis

4. *Chronic hypertrophic ulcerative vulvitis* is most often associated with a pre-existing or latent syphilis. I have included under this general head what has been variously termed as elephantiasis of the vulva, esthiomene, rodent ulcer, lupus of the vulva, granuloma inguinale and lymphogranuloma.

The literature on this subject is most confusing and in spite of recent studies especially on the subject of lymphogranuloma, I have kept to my original terminology, because it seemed simpler to group these various lesions under one head.

Fundamentally, regardless of other concomitant infections, chronic hypertrophic ulcerative vulvitis results from a block of the vulvar lymphatic system leading to chronic edema with hypertrophy on the one hand and lowered resistance to infection and necrosis on the other hand. Racially the negroid type is especially prone to these vulvar enlargements and from an infectious standpoint organisms carried by repeated sexual contact in unclean individuals predominate. Hence, negro prostitutes are prone to have it. Syphilis with its obliterative endarteritis is the most frequent underlying infection. Yet it is probably true that secondary infections, such as that due to Donovan's organism, the virus of lymphogranuloma, or the tubercle bacillus, are largely responsible for the persistent ulcerations and hypertrophies that characterize the further development of the disease. Lymphogranuloma is the best defined of these secondary infections. The Frye test points to a certain specificity, even though the responsible organism has not yet been isolated. Rectal ulcers leading to stricture are often associated with lymphogranuloma, but may also be found in tertiary syphilis. The inguinal lymph glands are often enlarged and necrotic.

Chronic hypertrophic ulcerative vulvitis may be broadly divided into two groups: those in which the hypertrophic changes predominate (so-called elephantiasis) and those in which ulceration is the most pronounced lesion (so-called esthiomène). There are, however, many cases that show both hypertrophy and ulceration. As a rule, the labia are the seat of these changes, less often the clitoris and prepuce

are involved, and in a third class, both prepuce and labia undergo hypertrophy with ulceration. The symptoms of this disease are pain on urination, at times incontinence of urine and feces, burning and a sense of dragging. Intercourse is often impossible owing to large tumors and scarring. In pendulous large tumors, walking is greatly impeded (Fig. 3).

Treatment.—The treatment of this disease is on the whole very unsatisfactory. In the presence of possible remnants of syphilitic infection, the iodides and mercurial treatment may help to heal the ulcerations. Injections of tartar emetic have been found of value in those cases with positive Frei test or Donovan's organisms. Under simple hygienic measures, exposure to light, keeping the tissues dry, the use of mild antiseptics to stimulate epithelialization, the large ulcers will often heal, provided no re-infection occurs. Large hypertrophic pendulous masses with nodules and relatively minor ulceration can be successfully removed surgically, even though the operative wound heals slowly. After such a vulvectomy, the tissues can more readily be kept clean and further infection and necrosis reduced to a minimum.

Carcinoma

5. *Carcinoma of the vulva* is the most serious and hence the most important of the five diseases we have chosen for discussion. As I have stressed in previous publications, its appearance and prognosis varies greatly with the portion of the vulvar tissues that may be involved. Four principal sites must be differentiated:

1. The vulvar skin
2. The vestibulum vaginæ
3. Bartholin's glands
4. The glans clitoris

These four are listed in the order of their frequency and in general it may be said that the first named, the epidermoid form, springing from the vulvar skin, is about twice as frequent as the other three forms combined. It is this epidermoid carcinoma of the vulva that so often arises on the basis of a pre-existing leukoplakic vulvitis, and justifies as a preventive measure the extensive removal of these leukoplakic areas.

Where a cancer develops from a leukoplakic vulvitis, I am convinced from long experience that it is bad surgery to fail to remove every bit of the associated leukoplakia, for if this is not done a new cancer may develop many years later from a remaining island of leukoplakia.

I have had numerous instances of this in my series. This epidermoid form is usually quite slow in its local development. Sometimes a lump may remain almost unchanged for a year or two (Fig. 4).

Degree of Malignancy.—Fortunately, the highly malignant forms of carcinoma of the vulva are the least frequent (Bartholin gland, clitoris and vestibular) so that it is not surprising that Eichenberg (Berlin) in a histo-pathologic study of 116 cases, found ninety-six tumors with differentiated cells (type 1 or 2); eleven tumors, intermediate in malignancy (type 3); and only seven tumors that were anaplastic (type 4). My own study of fifty-eight cases was not quite so favorable. I found thirty-seven differentiated (type 1 and 2); sixteen intermediate (type 3); and five anaplastic (type 4). The tendency to gland metastasis is almost as great in the differentiated forms as in the anaplastic, but local extension and rapidity of growth in the primary tumor usually corresponds with the degree of malignancy as determined histologically.

The clinical appearance of the neoplasm will also indicate its relative malignancy. The cauliflower everting forms grow more slowly than the inverting infiltrating tumors. The high percentage of early gland metastases is the most characteristic feature of vulvar cancer and upon it rests the whole rationale of treatment. Compared to corresponding stages in the local development of cancer of the cervix, we find gland metastases twice as frequently in cancer of the vulva (66 per cent compared to 35 per cent). This statement is not based upon clinical findings but upon histologic examination, for we often find hard, enlarged glands without evidence of cancer, and small, soft ones that contain a cancer nest.

The very large adherent or necrotic glands are, of course, all malignant, but, in general, adenopathy is not a reliable index of metastasis and should not influence our treatment.

Nor does the size of the local lesion help us in this matter, for I have often seen local ulcers 1-2 cm. in diameter with cancer metastases in the lymph glands ten times as large as the primary lesion. Yet, in spite of this tendency to metastasize to the tributary lymph glands, it is striking that as a rule the tumor remains limited to a very small portion of the body. Eichenberg in Berlin performed 41 autopsies in cancer of the vulva, and in only 5 instances did the cancer extend up to the aortic glands. This is a highly important contribution to our plan of treatment, for it explains the relatively high percentage of cures obtained when the local tributary lymph gland chain was removed with the tumor. There is such free anastamosis between the two inguinal regions and the vulva that a unilateral gland removal rarely results in a permanent cure. In more advanced cases the lymph gland cancer metastasis will burst through its capsule and since it usually lies close to the large femoral vessels, we may find involvement of these structures making complete removal impossible. Under pressure necrosis and associated infections, the glands may break down and open into the groin with the development of a huge cancerous ulcer. In Figure 5 is seen the anatomic distribution of metastatic lymph glands in my sixty-five cases of cancer of the vulva. The higher glands are not frequently involved, it will be noted.

Preventive Treatment.—Mention has already been made of irritative lesions of the vulva as a forerunner of cancer. The most significant of these is that form of atrophic vulvitis associated with leukoplakia. If in these cases of leukoplakic vulvitis a vulvectomy is refused by the patient, she should be kept under close observation so that the development of an early carcinoma is not overlooked. Every bit of leukoplakic skin must be removed to prevent recurrence of the irritation.

Warts of the senile type are evidence of local irritation and their removal is advisable since they are at times a forerunner of vulvar cancer. Cystic enlargement of Bartholin's gland persisting after the menopause, was reported in three out of six Bartholin gland cancers. Removal of these might have prevented the cancer. Finally, we should not leave untreated the tertiary ulcerations of the vestibular region associated with syphilis, especially in colored women, since when cancer develops in this area, it is usually on the basis of an old luetic ulcerative lesion. The elimination of the foregoing irritative lesions about the vulva should materially reduce the incidence of malignant change.

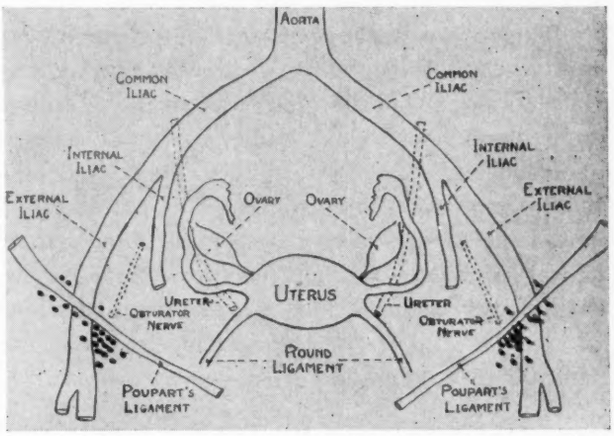

Fig. 5. Distribution of lymph gland metastases in carcinoma of the vulva.

Clinical Grouping of Cases.—In deciding as to the proper method of treatment, we must consider not merely the local and glandular involvement of the disease, but also weigh in the balance the patient's general physical condition, her ability to withstand radical surgery.

The extent of the vulvar lesion can readily be determined. Moderate gland hyperplasia is a normal finding in these old women. Only when glands are the size of an acorn, hard and multiple, can we be reasonably certain of a metastasis. With this in mind, I have divided cases into five groups:

Group I. Primary lesion less than 3 cm. in diameter. No evidence of gland metastasis.

Group II. Primary lesion from 3 to 7 cm. in diameter, without subpubic involvement. No positive evidence of gland metastasis.

Group III. Primary lesions over 7 cm. in diameter, or smaller lesions that show deeper infiltration or evidence of gland metastasis.

Group IV. Primary lesions with extension to the vagina, urethra or subpubic space, or those with adherent glands.

Group V. Cases involving the entire vulva with vaginal infiltration, or with large broken down inguinal metastases.

The first three groups comprise the cases usually suited for radical surgical measures. In

Group IV and V, only palliative cautery excisions or radiation can be attempted.

We cannot, however, include all the cases in Groups I, II and III as operable, for in a certain number of these women, heart and kidney lesions, or general debility present a surgical contra-indication. We will rarely feel justified in doing an extensive operation on a woman over eighty years of age. Even at seventy-five we hesitate to do a radical gland removal. Yet age alone should not be our guide, for many women at seventy-five are better risks, are less debilitated, than others at sixty-five. The extension of carcinoma of the vulva is less rapid than that of cancer of the cervix. Hence we have found that 75 per cent of cases presenting themselves to us in the past ten years were suitable for radical operative intervention.

Treatment.—Owing to the relative infrequency of carcinoma of the vulva (4 per cent of all genital cancers in women), it is not surprising that few gynecologists have developed any definite routine in the management of their cases. While radiation treatment has a certain number of advocates (Heyman, Bowing, Cahen-Delporte, Schreiner and Wehr), the majority have always favored surgical measures, sometimes supplemented by radiation. These operations have, however, varied greatly in their extent. Some have contented themselves with a simple vulvectomy; others have removed the superficial inguinal-femoral lymph-chain with the vulva (Calvin and Rentschler, Tausch); a third group has included the deeper glands situated on either side of the external iliac vessels (Basset, Taussig); and a fourth group has also included the removal of glands in the iliac triangle usually through a laparotomy (Stoeckel, Kehrer).

The more or less routine adoption of a certain method of treatment does not mean that there are not occasional exceptions. My own routine, wherever possible, is to do the lymph gland operation originally suggested by Basset, together with a vulvectomy and without any radiation treatment before or after operation. This is my procedure in approximately 75 per cent of the cases as they have come under my observation in the past ten years. In almost every instance some sort of a "cleaning-up" of the local lesion will give palliative relief. The mere superficial extent of the ulcer should not discourage the physician. I am convinced that many cases of vulval cancer are now being condemned to a painful, and perhaps needless, death by an unjustified policy of despair. Cases are labeled hopeless that can still be saved or alleviated.

The splendid results obtained in the treatment of cervix cancer by x-ray and radium have not been duplicated in malignancy of the vulva. The reason for this is two-fold: (1) Vulvar cancer metastasizes early to the lymph glands where it can rarely be completely destroyed by deep x-ray or radium pack application; (2) the skin of the vulva is normally very sensitive to relatively small amounts of radiation, so that complete destruction of the malignant ulcer is usually impossible without deep painful necrosis of the surrounding tissue. Nevertheless, we find that Heyman of Stockholm, an enthusiastic radium therapist, is satisfied with his results. In 1931 he reported fourteen cases treated from 1914 to 1923, by a combination of radium and deep x-ray, with three cures (21.4 per cent). We have been compelled in three patients to excise a radium burn surgically in order to relieve the patient of the excruciating pain caused by the burn. In none of these three cases could we find microscopically evidence of remaining cancer, but in all three there was almost instantaneous relief of pain in spite of the considerable surgical wounds caused by this secondary excision.

The five-year results obtained by us with various methods of treatment in carcinoma of the vulva demonstrates, beyond peradventure, the decided advantages of the radical operation. From this it will be seen that radiation treatment alone does not yield more than 10 to 15 per cent of five-year cures. The superficial type of operation with vulvectomy is only slightly better with its 25 to 30 per cent cures, whereas the radical operation by the modified Basset operation gives as high as 65 per cent five-year freedom from recurrence. Even granting that the total number of cases thus far reported is relatively small, there can be no question that this more radical procedure is definitely to be preferred over any other.

Kehrer, Vogt and I have called attention to the

fact that recurrences not infrequently take place even after five years. If these recurrences are local, there is still a chance of obtaining a final cure by excision of the recurrent ulcer. Vogt reports three recurrences, eight, fourteen and eighteen years after operation. Whether these late recurrences are more frequent in cancer of the vulva than in other forms of malignancy is open to argument. There is, however, a definitely smaller number who survive the ten-year limit. This can readily be explained by the fact that the average age of patients with cancer of the vulva is close to sixty years and that the normal life expectancy of such an individual is less than ten years more. Deaths from apoplexy, pneumonia or nephritis, without evidence of any recurrent malignancy are frequently reported, as was the case in our own series. The ten-year survival rate, therefore, has not the same value that it has in cancer of the uterus or breast, where the average age incidence is between forty-five and fifty years.

Cases that have been lost track of must be considered as recurrent, even though they remained well for several years and the prognosis seemed good. By means of careful social service follow-up, it should be possible to keep in touch with practically every case. Only one of our 49 Basset operation cases have thus been lost sight of. The ten-year cure rate, eliminating those that positively died of other causes, was 55 per cent, compared to 65 per cent five-year survivals.

In conclusion, may I ask that you give more consideration to these not uncommon diseases of the vulva. In this brief presentation it was possible to stress only a few high points. Gross errors in diagnosis are not infrequent and, most serious of all, ineffective treatment is often given in such conditions as carcinoma where the chances for success by radical surgery are so good. I would urge a more careful study of these diseases.

The problem that confronts us today is the need for the medical man to be equipped to meet the medical needs and adjust himself to the present social and economic problems. The future of medicine depends upon the present work and efforts of its practitioners. If physicians, through constant postgraduate effort, continue to give medical care of good quality, and if, through the wholesome knowledge of the social aspects of sickness, they continue to bring the truth to the people, little need be feared for the future of medicine.—GROVER C. PENBERTHY, M.D., at the County Secretaries' Meeting, Lansing, February 7, 1939.

Fungi

Relation to Respiratory Allergy*

Air Survey in Southern Michigan

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■ Within recent years fungi have played an ever-increasing rôle in allergic diseases, especially in asthma and nasal allergy.[1,2] They have also been recognized as a common complicating factor in other diseases of the respiratory tract. Evidence indicates that mold spores in the air show marked variations which are dependent on regional conditions. We therefore felt that the diagnosis and treatment of the above named diseases would be greatly aided in Michigan by a survey of the air for its fungus content.

After intensive preliminary studies concerning the growth and exposure of plates the details of which will be published elsewhere[3,4] we decided to employ the following method: Sabouraud plates were exposed for thirty minutes† daily on top of a four-story building in the center of Detroit for a period of one year. The number of colonies of each genus was counted, identified, and entered on a graph. Realizing the variations to which our results would be subject, we attempted to establish as many controls as possible. For instance, plates were exposed simultaneously under the same experimental conditions, three feet and ninety miles apart from

*This investigation has been made possible by a grant of Mr. J. E. Fields, Detroit, which we gratefully acknowledge.

†After many exposures ranging from five minutes to twenty-four hours, we decided that the optimum exposure time was thirty minutes during the winter months. During summer, when a much larger number of fungi were found, two plates were exposed consecutively for 15 minutes each in order to facilitate more accurate counting.

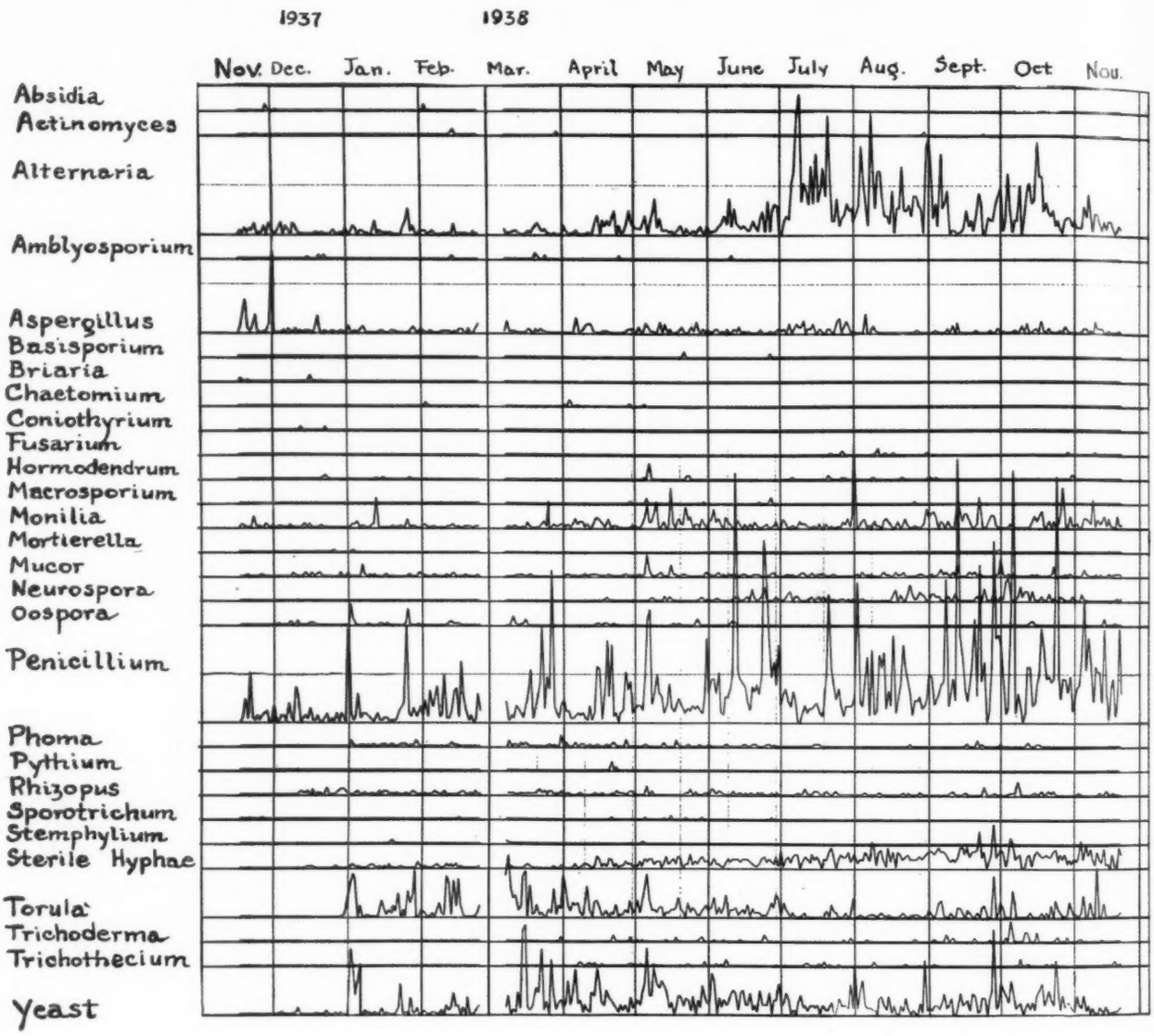

Fig. 1. Individual daily counts of fungus spores grown on the plates exposed. There was no count from February 20 through March 6, because of illness of A.B.A.

the original station throughout the whole duration of the survey. Other controls included simultaneous exposures at four buildings of different heights in Detroit. We also selected 23 different habitats for fungi throughout the city, namely such places as a bakery, butcher shop, pig pen, cow stable, chicken coop, library room, etc., where plates were exposed simultaneously. These controls[4], it is true, showed certain individual differences in the fungus flora at the different stations; but on the whole a definite pattern of distribution for certain fungi was recognized which tended to tally in all these exposures on certain days and at certain seasons. Precipitation and low barometric pressure tended to free the air temporarily from fungus spores. Inland winds, as well as high barometric pressure, increased the count. Continued freezing and subfreezing weather inhibited propagation of spores.[4]

Two questions are to be answered in this paper: Firstly, which are the most common fungi in Michigan, and secondly, are there fungus seasons in this area? The accompanying graph presents the distribution of the fungi encountered during the experimental period of one year.

Only a few fungi showed seasonal appearances, while the majority were present practically throughout the whole year. Among

the latter, **Penicillium showed a marked predominance, some of the counts reaching 138 colonies during the half-hour exposure. Two other forms which we consider rather significant clinically are yeasts and Torula. The highest counts of yeast and Torula were obtained at the time when relatively few spores of other genera were present in the air, namely, from December to March. Aspergillus, which some believe to be very abundant, gave relatively low counts throughout the period of the survey.**

The two genera to which a "season" can be ascribed[1] are Alternaria and Monilia. But neither of these two fungi was completely absent for any length of time during the year. Alternaria was prevalent from July to October, while Monilia grew sparsely from November to March. In this respect the two outstanding seasonal fungi covered by this survey differ greatly from pollen which is completely absent when out of season.[5]

Among fungi which were quantitatively of minor importance in our survey, Hormondendrum and Macrospora showed a definite seasonal appearance from May to September, Neurospora from April to December, and of Trichoderma and Trichothecium from April to November. In evaluating the question of a fungus season one should recall that during the winter months considerably less spores are in the air than during the summer months. Therefore, the complete or partial absence of a certain fungus in winter should be discounted as being a characteristic feature of all molds.

Another group of fungi which unquestionably is more significant in allergy than is generally accepted at present, are rusts and smuts. They are not included here since they did not grow on our plates. However, exposures of vaseline coated slides carried out by Waldbott and Ascher[3] showed that in 1938 the peak of the rust season was in the early part of June, that of the smut season at and during the harvesting time. Smut was found in the air of Detroit as late as November. There are indications that the development of rust and smut depends largely upon the amount of moisture during the summer which favors their growth.

Since this survey has been made, numerous clinical observations on patients have been recorded which will be accumulated for a later publication.

Summary

A survey of the content of the air for fungus spores in Southern Michigan was carried out during a twelve-month period.[4] The colonies of each fungus grown from daily thirty-minute exposures were identified, counted, and presented graphically. Penicillium, yeasts, and Torula were most prevalent among the perennial fungi. Alternaria and Monilia were present throughout the year, but showed seasonal predominance, namely, from July to November, and May to November, respectively. Among fungi which appeared to be seasonal, but which gave only low counts at any time, were Hormodendrum, Macrospora, Neurospora, Trichothecium, and Trichoderma.

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ANNOUNCEMENT OF A STUDY TO EVALUATE ORIGINAL SEROLOGIC TESTS FOR SYPHILIS

More than five years ago the Committee on Evaluation of Serodiagnostic Tests for Syphilis, in coöperation with the United States Public Health Service, conducted a study to evaluate original serologic tests for syphilis or modifications thereof in the United States. The results of this study were published shortly after the investigation was completed.[1]

Consideration is now being given by the Committee to the organization of a second evaluation study of original serologic tests for syphilis or modifications thereof within the next year. If the need for an investigation of this kind seems to justify the cost, invitations will be extended to the authors of such serologic tests who reside in the United States, or who may be able to participate by the designation of a serologist who will represent them in this country. The second evaluation study will be conducted utilizing methods comparable to those employed in the first study.[2]

Serologists who have an original serologic test for syphilis or an original modification thereof and who desire to participate in the second evaluation study should submit their applications not later than October 1, 1940. The applications must be accompanied by a complete description of the technic of the author's serologic test or modification. All correspondence should be directed to the Surgeon General, United States Public Health Service, Washington, D. C.

[1]Ven. Dis. Inform., Washington. June, 1935, 16:189. J.A.M.A., Chicago. June 8, 1935, 104:2083.
[2]J.A.M.A., Chicago. Dec. 1, 1934, 103:1705.

Addison's Disease

Recent Contributions to Treatment*

By W. O. Thompson, M.D.
Chicago, Illinois

W. O. Thompson, M.D.

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Until a few years ago, Addison's disease was invariably fatal. The duration in the majority of cases varied from six months to two years, the shortest on record being eighteen days. Patients rarely lived longer than four years. The situation has now completely changed and with adequate therapy, life may be greatly prolonged.

Two lines of development have been responsible for this improvement. First, something has been learned about the nature of chemical alterations in the disease;[3,4] and, second, active therapeutic agents have been developed. The demonstration of the low concentration of sodium in serum and its increased excretion in the urine led to a trial of sodium salts with brilliant therapeutic results. Since the isolation by Rogoff and Stewart[6] of an extract capable of maintaining the lives of adrenalectomized dogs, many extracts of variable potency have been prepared. It is only in the past few years that commercial extracts of consistent potency have been available. Recently a synthetic compound, desoxycorticosterone acetate, has become available and may offer some promise. Unfortunately, in many reports in the literature the administration of sodium salts has been combined with that of cortical extracts or of desoxycorticosterone, and it is frequently difficult or impossible to determine which produced the beneficial result. The only real proof of the efficacy of an extract or of a synthetic substance is its ability to maintain patients with Addison's disease for long periods of time without any other form of therapy.[9]

Materials Used

We have used two cortical extracts:

1. The extract of the Wilson Laboratories†, each cubic centimeter of which represents 75 grams of fresh beef adrenal. Our experience with this extract covers a period of more than four and a half years and there is no doubt about its potency.

2. The extract of the Armour Laboratories.** We have used this extract during the past year and it appears to be potent. The relative effectiveness of the two extracts has not yet been determined.

Most of our observations with desoxycorticosterone acetate have been made with the product of the Schering Corporation which has been supplied to us in generous quantities.†† We have also had a very limited quantity of the Ciba product.§

Treatment of a Crisis

Addison's disease, when untreated, runs a gradual or rapid downhill course, spontaneous crises and remissions commonly alternating with one another until the patient finally dies in a crisis. It is commonly in a crisis that the patient first enters the hospital and the treatment of this condition is, therefore, of great importance. A crisis is characterized by nausea and vomiting, marked weakness and prostration, fever, often pain in the epigastric, lumbar, dorsal or precordial regions and occasionally diarrhea.

Irritability, mental wandering and faulty memory are often present. There is an accentuation of all the abnormal findings in the blood of which the most important is a reduction in the concentration of sodium. Other changes which have some therapeutic significance are a moderate increase in the concentration of potassium in serum and a decrease in the concentration of sugar (variable). There is a marked reduction in the systolic, diastolic and pulse pressures which in the terminal stages can not be obtained, and there is an increase in the intensity of pigmen-

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†Kindly supplied by Dr. David Klein.
**Kindly supplied by Dr. Edwin F. Pike.
††Courtesy of Drs. Schwenk and Gilbert.
§Courtesy of Dr. Oppenheimer.

tation. The symptoms vary from patient to patient. Nausea and vomiting are the most constant although their extent varies markedly in different individuals. The development of nausea in any patient with Addison's disease represents an emergency. In rare instances diarrhea may be a symptom without nausea or vomiting. Sometimes the symptoms are bizarre as in the case of a 22-year-old man, who, during many of his crises, had complained of pain in the region of the lower sternum which radiated to both sides of the chest, was aggravated by respiration, accompanied by an increase in temperature to as high as 104.8° F., but no abnormal findings in his chest on physical examination or by roentgen ray. The pain and fever disappeared when his crisis was controlled. The condition of the patient in a crisis rapidly goes from bad to worse and treatment must be started at once. It consists of the following:[9]

1. Intravenous administration of 10 c.c. or more per hour of an active adrenal cortex extract. There is no danger at present of giving too much, but great danger of giving too little. In severe crises we have occasionally had to give as much as 40 c.c. per hour for the first two hours.

2. Intravenous administration of 5 per cent dextrose in normal salt at the rate of one liter in six hours. Fifty c.c. of 2.5 per cent sodium citrate may be added to one liter of fluid in each twenty-four hour period. If a fine needle is used, the cortical extract may be administered by the nurse through the rubber tubing used for intravenous administration.

3. Substitution of oral administration for intravenous administration of sodium salts as soon as they can be retained. Sodium citrate is very satisfactory for oral administration and may be given in a dose of 10 grs. every two or three hours until a maintenance program is worked out.

The use of large doses of extract is very important and accomplishes more than sodium salts alone. In the past many patients have received too little extract. A critical review of the data of patients who have died leads us to believe that in most instances their deaths were caused by an inadequate amount of extract. The disappearance of nausea with the treatment outlined above is striking and within twelve to twenty-four hours the patient can often retain food and sodium salts by mouth. In severe cases, however, nausea and vomiting may persist for several days. If the condition is detected sufficiently early, the patient may sometimes be revived by extract alone. As a rule from 30 to 40 c.c. given intravenously or subcutaneously at the rate of 10 c.c. every thirty to sixty minutes is sufficient for this purpose. If the patient cannot be revived with 40 c.c. of extract administered in this way, intravenous administration of fluid should be started at once. After vomiting has developed, it is usually, but not invariably, necessary to administer salt intravenously. If nausea and vomiting are marked, no attempt should be made to revive the patient with extract alone because of depletion of the sodium reserves of the body. Extract, sodium chloride and dextrose should all be started at once in the doses outlined. If treatment is started early the patient can usually be revived without difficulty, but the farther a crisis progresses the more difficult it is to do so, and when coma has set in the patient usually dies.

Maintenance Treatment

As nausea and vomiting disappear and appetite returns, the dose of extract is gradually reduced and the oral administration of sodium salts is substituted for intravenous administration, or their administration discontinued altogether if it is planned to treat the patient with extract or synthetic material alone. In the course of from two to fourteen days, the patient can usually be placed on a maintenance program which may involve any of the following procedures:

1. The subcutaneous administration of adrenal cortex extract in an adequate dose. The smallest dose with which we have been able to maintain any patient up to the present time is 10 c.c. daily and usually much more than this is necessary. An adequate dose is one which over a period of many months will prevent the development of crises. Our experience leads us to believe that many patients require from 30 to 50 c.c. daily to produce optimum results. The doses referred to apply to the product of the Wilson laboratories.

2. By the subcutaneous administration in oil or in pellets of desoxycorticosterone acetate (10-15 mgm. daily). As pointed out below, the sta-

tus of this synthetic material is still to be determined.

3. By the oral administration of sodium salts (12 Gm. sodium chloride and 4 Gm. of sodium citrate or bicarbonate daily).
4. By a combination of 1 and 3.
5. By a combination of 2 and 3.

It is of the greatest importance that the diet be high in calories and according to Wilder, et al,[13] and Allers and Kendall,[1] low in potassium. The weight of the patient is the single most important index of progress, loss of weight often preceding the appearance of a crisis. Failure to gain weight is a serious omen. Improvement in the nutritional state is not a matter of chance. The specific therapeutic measures outlined above can not be relied upon to produce enough increase in appetite to cause an adequate gain of weight. A diet should be outlined on which the patient will gain weight. A very simple way of increasing the caloric intake is by the addition of cream. Patients with Addison's disease are reported not to tolerate fat foods well, but they do not experience difficulty if an adequate dose of extract is administered.

The response of patients to treatment varies tremendously. Similarly, the effective dose of extract varies markedly from patient to patient. Some patients may be maintained for periods of many months with sodium salts alone with or without a low potassium diet. Such patients are not so energetic and usually do not gain as much weight as those receiving adequate doses of extract. Sooner or later in such patients the addition of extract is necessary for maintenance, and it appears probable that patients can not be maintained indefinitely with sodium salts alone.

In cases of economic stringency, large doses of sodium salts may be used and supplemented with small doses of cortical extract (5 c.c. daily) or of desoxycorticosterone acetate (5-10 mgm. daily). These measures are not as effective as adequate doses of extract. The only way in which maximum improvement can be produced is by the administration of large doses of extract. When the dose of extract is adequate, the addition of sodium salts in excess of those contained in the normal diet does not improve the clinical condition of the patient.

Oral Administration of Extract.—Thorn, et al, report adrenal cortex extract to be 40 per cent as effective in man when given orally in glycerin as when given intravenously,[11] and Grollman and Firor[2] have claimed satisfactory results from oral administration in animals. As a result of carefully controlled observations we have been forced to conclude that the extract is less than 20 per cent as effective by mouth. Since the cost per unit of material is approximately the same regardless of which method of administration is used, it must be concluded that at the present time oral administration is impractical, although desirable.

Desoxycorticosterone Acetate

A synthetic compound, desoxycorticosterone acetate, has recently attracted much attention. The preparation of this compound from stigmasterol was announced in 1937 by Steiger and Reichstein[8] and recently Reichstein and von Euw[5] have succeeded in obtaining desoxycorticosterone from an extract of beef adrenal, which would appear to confirm its natural occurence. It is possible that in the process of extraction of desoxycorticosterone most of the potency of the naturally occurring hormone is lost.

Desoxycorticosterone acetate is reported to maintain bilaterally adrenalectomized animals. It has been supplied in limited quantities to a few laboratories including our own and appears to produce some improvement in patients with Addison's disease. According to Levy Simpson[7], 1 mgm. is equivalent to 2 c.c., and according to Thorn[10], to 3 c.c. of adrenal cortex extract. In our hands, it has proved much less potent than this, 1 mgm. being equivalent to about 1 c.c. of Wilson's adrenal cortex extract, which was the extract Thorn used for assay. It has been supplied in sesame oil in a concentration of 5 mgm. per c.c. (Schering Corporation and Ciba Pharmaceutical Products). Our experience has been largely with the material of the Schering Corporation which is now made in this country although we have had some experience with the Ciba product which is still imported.

It would appear from our preliminary observations that some patients may be maintained in a fairly satisfactory state with the subcutaneous administration of 10-15 mgm. per day when not supplemented with sodium

salts. When supplemented with sodium salts (12 gm. sodium chloride plus 4 gm. sodium citrate daily), smaller doses may be adequate. However, conservatism must be exercised in drawing conclusions about the efficacy of this material.

In our experience, some patients cannot be maintained with any dose, as much as 30-40 mgm. per day proving ineffective. Complications of its use are edema which may be confined to the lower legs or be generalized, hypertension, cardiac failure and death. The edema resembles that sometimes observed following the administration of testosterone propionate and is probably caused in most instances by retention of sodium chloride.

Levy Simpson[7] and Thorn[12] have recommended the subcutaneous implantation of pellets each containing from 50 to 150 mgm. of desoxycorticosterone acetate. Because of relative insolubility of this material in body fluids, it is liberated at a very slow rate, which, according to Thorn, is about 0.3 mgm. per pellet per day. Thorn also states that this amount is equivalent to 0.5 mgm. injected subcutaneously in oil. At this rate, it would be necessary, according to our experience, to implant 30 or more pellets in some patients in order to maintain them without the supplementary administration of sodium salts. This seems like a great many pellets. It must be emphasized that the only real test of the efficacy of any product in the treatment of Addison's disease is its ability to substitute completely for the adrenal cortex.

According to Thorn[10] the effect of desoxycorticosterone acetate does not become evident for four hours and the effect of a single injection apparently lasts for at least twenty-four hours. The advantage of this type of action is that the daily dose may be given in a single subcutaneous injection. The disadvantage is that the effect does not begin quickly enough for the treatment of crises. The effect of adrenal cortex extract begins almost immediately after administration and it should, therefore, still be used in crises in the doses outlined although it may prove advantageous to supplement it with synthetic material. It is clearly established that the adrenal cortex influences several important functions of the body, but it is still not clearly established whether or not it produces more than one hormone. In particular it is still to be determined whether or not desoxycorticosterone is one of the hormones of the adrenal or merely a closely related compound, and if it should prove to be a hormone, it is still to be determined whether or not it is the only product in the gland that is necessary in the treatment of Addison's disease.

Moreover, the maintenance dose of this substance is still to be worked out accurately. It will take at least another year and probably longer to determine the precise therapeutic status of desoxycorticosterone acetate.

Basal Metabolism

In about two-thirds of our patients we have observed some depression of the basal metabolism varying from –16 per cent to –35 per cent. In one receiving large doses of extract the basal metabolic rate rose to within normal limits during treatment, but it is too early to state whether or not adequate treatment will always produce this effect. With the doses of extract we were able to administer to most of our patients some depression of the basal metabolism persisted. Correcting this by administering desiccated thyroid improved the clinical condition of the patient without aggravating the symptoms of Addison's disease in spite of reports in the literature that thyroxine may precipitate a crisis in adrenalectomized animals. In a medical student, whose basal metabolic rate was –35 per cent, typical myexedema developed. As a result his cerebration was so impaired that he was unable to pass the examinations in his final quarter until his basal metabolism had been raised to normal with desiccated thyroid.

The Blood Pressure

When a patient is adequately treated and shows an increase in body weight to within normal limits, the blood pressure usually rises to normal. However, the increase in blood pressure appears to be related to the nutritional state of the individual as well as to the function of the adrenal cortex. Regardless of the dose of cortical extract used, it may remain low until the body weight rises above a certain level. A mild crisis may develop and disappear with treatment without any significant change in blood pressure. A patient may recover from a moderately, severe

crisis some time before any rise in blood pressure is noted.

Infections

Patients with Addison's disease appear to be more susceptible to infections than normal individuals and the presence of an infection appears to increase the requirement for cortical extract. Two main types of infection are encountered, viz., upper respiratory infections and tuberculosis. Sometimes a crisis is confused with an upper respiratory infection. A febrile reaction is characteristic of both and a crisis may be precipitated by an upper respiratory infection. When an upper respiratory infection develops, an emergency must always be considered to exist and the dose of cortical extract or synthetic material increased. When tuberculosis is present, larger doses of cortical extract are necessary than in its absence and without adequate treatment it is impossible to improve the nutritional state sufficiently to combat the infection. With adequate treatment it may be possible to arrest pulmonary tuberculosis.[9]

Operations

Every added stress and strain presents a problem in patients with Addison's disease and in the past any operative procedure has presented an almost insurmountable difficulty. It would now appear that with adequate therapy, patients may be subjected to surgical procedures without serious reaction.

This is well illustrated by one of our patients who had the disease in a severe form. She developed a typical attack of acute appendicitis the day before we had planned to discharge her after a long period of hospitalization. Her maintenance dose had been determined to be 20 c.c. of Wilson's adrenal cortex extract daily. In the hour preceding operation an additional 50 c.c. of extract were administered intravenously in divided doses of 10 c.c. each, and in the postoperative period 5 c.c. every half hour for 30 hours after which the dose was gradually reduced until it reached a level of 20 c.c. daily by the seventh postoperative day. Her postoperative course was extremely mild and characterized by the absence of nausea and vomiting. In fact, it was milder than that of most patients without Addison's disease. It would appear that the large doses of extract employed were in part responsible for her uneventful postoperative course.

Present Status of Treatment

It would appear that with the use of large doses of adrenal cortical extract many patients with Addison's disease may now be maintained in satisfactory condition for many years. Even when active tuberculosis is present, it may sometimes be arrested with adequate therapy. There is some question, however, whether patients can be maintained indefinitely with desoxycorticosterone acetate with or without supplementary administration of sodium salts. Many reports in the literature are over-enthusiastic about the efficacy of small doses of adrenal cortex extract and of desoxycorticosterone acetate.

The cost of treatment is relatively enormous, the smallest effective dose of extract representing a yearly outlay of about $1,200. One of our patients gets about $7,500 worth of material per year. Desoxycorticosterone acetate has so far not reduced the cost of treatment greatly.

Because of the tendency of crises to develop in patients with Addison's disease and their rapidly fatal outcome in some instances if untreated, every patient with the disease should be within easy reach of a physician who has special knowledge of the disease and the facilities for treating it. They should exercise great caution during infections, periods of travel and very hot weather.

Summary

With large doses of adrenal cortex extract (10-50 c.c. daily) many patients with Addison's disease may be maintained in a satisfactory condition for long periods of time. Even tuberculosis may be arrested with adequate therapy.

Initial reports on desoxycorticosterone acetate are over-enthusiastic. Its precise clinical status is still to be determined.

In evaluating therapeutic agents it is important to use only one at a time, to observe the effect of each one for a long period of time, and to take into consideration the natural history of the disease.

In the treatment of a crisis, it is of the greatest importance to begin treatment at once and to

use adequate doses of extract (10 c.c. or more per hour) as well as suitable fluid intravenously.

It is still uncertain whether or not desoxycorticosterone is of value in crises.

Oral administration of the extract is impractical at the present time because of the enormous doses required.

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AMERICAN COLLEGE OF PHYSICIANS

The Twenty-Fifth Annual Session of the American College of Physicians will be held in Boston, with general headquarters at the Statler Hotel, April 21-25, 1941.

Dr. James D. Bruce of Ann Arbor, Michigan, is president of the college and will have charge of the program of general scientific sessions. Dr. William B. Breed of Boston has been appointed general chairman of the session, and will be in charge of the program of clinics and demonstrations in the hospitals and medical schools and of the program of panel and round table discussions to be conducted at the headquarters.

Brill's Disease

Report of a Case

By Dan M. Gordon, M.D.
Detroit, Michigan

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■ Brill's disease, or endemic typhus fever, is one of the rickettsial disease group, which includes[3]:

(1) Typhus fever (which is louse or flea borne)

(2) Typhus-like fevers (tick borne, including Rocky Mountain spotted fever)

(3) Tsutsugamushi disease (mite borne)

(4) Reduviid scarlatinosis (transmitted by Reduviidæ).

Typhus fever is an acute infectious disease, which is seen in both the endemic and epidemic forms. In the latter it is thought to be transmitted by the body louse. In this form it has been among the causes of many of the greatest plagues; being associated with massings of peoples in cities, trenches, prisons, ships, et cetera.

It is much milder in the endemic form, known as Brill's disease after Nathan Brill who described sporadic cases in New York in 1910. The endemic variety is thought to be due to transmission by the rat flea. The causative organism is now definitely said to be the Rickettsia prowazeki, first noted by Ricketts in 1910 in lice infected with Mexican typhus. While the mortality in the epidemic form has varied from 5 to 70 per cent, it is found to be from 0 to 4 per cent in Brill's disease. Frant[5] reported four deaths in eighty-two cases in New York city between 1932 and 1936. All occurred in persons over the age of fifty.

Grossly, there is no distinctive pathologic change observable at autopsy. The pathology is concerned with the peripheral vascular system, for the most part. "Proliferative lesions of the small blood vessels are found, both at the sites of the rash and in the skeletal muscles.[3]" Frequently mural thrombi are found here and may cause skin necrosis. A dis-

tinctive perivascular infiltration occurs in the skin producing the so called "typhus nodules" of Fraenkel.[7] In Wolbach's series of post-mortem examinations at Warsaw in 1920 small lesions were found in the brain and spinal cord. These were tubercle like, proliferative and composed mostly of neuroglia cells and mononuclear cells.

Symptoms

The disease usually starts abruptly with chills, fever and headache. This latter is a constant feature. There is marked prostration and frequently neuromuscular and back pains. The fever is high, spiking and remittant, with a proportionately high pulse. The face is flushed. In Blatteis' series of 138 cases the spleen was palpable in 28 per cent and the white blood count ranged from 5,000 to 18,000.

There is a typical macular eruption which appears between the fourth and seventh days in 97 per cent, and which usually does not last more than three days. It is seen at the base of the neck, on the chest, back, abdomen and extremities. It is pink at first, later becoming deeper in color; then purplish red and finally brownish red. It never appears in crops and seldom disappears entirely on pressure. The disease cannot be recognized until the rash appears. Confirmation is obtained by the Felix-Weil reaction. This agglutination is quite constant but does not appear before the rash. Hence it is of no aid before that stage. Standard cultures designated as X-19 are used for doing this agglutination.

The fever is usually highest for five to ten days, with remission usually occurring by the tenth to twelfth day. An important sign in prognosis is the severity of the mental symptoms and the complications. The mental and nervous symptoms are quite striking and may simulate some of the acute cerebrospinal diseases. In some these become worse regardless of the fall in temperature and delirium and coma may ensue. In these cases the rash may remain and become increasingly hemorrhagic.

Bronchitis and Bronchopneumonia are the most feared complications and are the chief cause of mortality. The parotid and submaxillary glands are frequently infected. The thrombi may extend to the larger vessels and cause considerable difficulty.

There have been but three cases reported in Michigan during the period from 1934 to 1938.[4] There were two in 1936 and one in 1938. One of the former, which was confirmed by the Detroit Department of Health is here presented.

The patient was a white woman, aged forty-two, who was first seen at home on September 11, 1936. At this time the only complaint was that of severe frontal headache, bursting in character, of one day's duration. The only physical finding at this time was a temperature of 104. This state continued for eight days at which time she was hospitalized.

At admission she complained of pain, in the flanks and buttocks, which seemed to drag her to the floor. Her headache was severe, and there was a burning sensation under the skin of the face. She now had a diarrhea. There was a diffuse pink petecheal rash over the chest and abdomen.

She had been at a lake resort from June to September and had not felt "quite right" on her return. She had also just had a visit from a relative in New York. No other members of the immediate family were ill. The past history was non-contributory.

Course in the hospitals: The patient continued quite ill, restless and very sensitive to the touch. She was occasionally stuporous and moaned a great deal. She began to develop paranoid symptoms, and accused the nurses of trying to end her life, et cetera. Later, she had no recollection of these mental disturbances. The skin was hot and dry to the touch. The rash extended over the buttocks, chest and abdomen. The tongue was coated and the teeth dirty. Blood pressure was 106 systolic; 70 diastolic. By September 21 the rash had largely faded, although the fever still ranged from 102 to 104. She was still somewhat stuporous. There were some coarse râles at the lung bases. The spleen was not palpable. By September 24 the rash had disappeared, and the temperature was down to normal. Three days later she developed an abscess at a hypodermic site on her left arm. This was opened and drained.

Laboratory: September 15—Hb., 86 per cent; index .97; rbc 4; 420,000; wbc 6,000. Urine amber, acid, sp. g 1010. alb. tr. Microscopic—few coarse granular casts and 4 wbc per high powered field. Kahn neg. Agglutinations neg. to B. Typhosus, Para A and Para B.

September 16—Wbc 6400.

September 18—Rbc 4,780,000; wbc 16,000. Four urine examinations negative for findings. NCN 39.9. Sugar 0.117, Kahn neg.

September 21—Blood culture neg. after five days. Mellitensis pos. 1:500, Widal—B. Typhosus, and Para A neg. Para B positive 1:80. Agglutinations for B. Dysentery; Shiga neg. Hiss and Flexner positive through 1:160.

September 24—0.1 Brucine intradermal neg.

October 1—B. of H. reports Proteus x 19 positive in 1:1000 dilutions, confirming the diagnosis.

Treatment—As there is no specific treatment for this condition, the patient was treated symptomatically.

Summary

A case of endemic typhus fever with some pertinent remarks on the diagnosis of this disease has been presented. The source of transmission of the disease to this patient remains undiscovered. The occurence of isolated cases of typhus fever without mortality, indicates that the condition is frequently undiagnosed. It should always be borne in mind in treating diseases of obscure etiology associated with high fevers.

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Ophthalmology

Recent Advances*

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■ BY RECENT advances I take my subject to mean advances made chiefly within the last ten years.

Among them I might mention biochemical studies of the crystalline lens by Müller, Krause, Salit and our group at Northwestern; the use of orthoptic training in the treatment of squint; various measures which have made the intra-capsular operation for cataract safe and practical; the experimental production of progressive exophthalmos by anterior lobe pituitary extract given to thyroidectomized animals by Smelzer; Naffziger's decompression of the orbit for progressive exophthalmos; the invention and application of contact glasses and a more logical classification of fundus changes seen in hypertension and nephritis. I shall discuss none of these subjects, however, but shall limit myself to three other advances which I consider important, and of which I have some personal knowledge.

It is pleasant to be able to say that in all of these subjects American ophthalmologists have made important contributions, and that in at least two of them, these have been the most important.

Trachoma

A good deal of work had been done on the etiology of trachoma prior to the last ten years. Halberstaedter and Prowazek had described in 1907 peculiar bodies in the epithelial cells which they considered to be a parasite and the cause of trachoma. Lindner, Axenfeld, and others had studied these bodies, which they found present not only in trachoma but in non-gonorrheal conjunctivitis of the new-born. It was the finding of these bodies in diseases other than trachoma and the difficulties of finding them in old cases of trachoma which led many ophthalmologists to doubt their etiologic importance. Cuenod and others succeeded in producing trachoma by bacteria-free filtrates, and there was a growing tendency to disregard the findings of Halberstaedter and Prowazek.

Virus Infection.—In about 1932 Phillips Thygeson began to work on the subject of trachoma at the University of Iowa. He first made himself familiar with the cytologic findings in other virus diseases and noted the resemblance of the Halberstaedter-Prowazek bodies to those found in psittacosis. He learned that the agents of certain virus diseases, because of the size of their particles, will not pass ordinary Berkfeld filters, or will do so only when present in extraordinary quantities. They will pass, however, through collodion filters of a certain pore-size made by the Elford method, which are not permeable to bacteria. With these filters he studied material from non-gonorrheal ophthalmia of the newborn and from trachoma, both containing epithelial inclusions and the free forms of the same

*From the Department of Ophthalmology Northwestern University Medical School, Chicago, Illinois. Read at the annual meeting of the Michigan State Medical Society, Grand Rapids, Michigan, September 21, 1939.

nature found outside of the cells which are known as elementary bodies (Fig. 1). Material from non-gonorrheal ophthalmia of the newborn contains many more of these bodies than does material from trachoma, hence it has been called inclusion blennorrhea. In filtrates of such material numerous elementary bodies could be found, but no bacteria and with such filtrates he was able to produce an identical disease in sphinx-baboons and in human volunteers, including himself. Inclusions could be found in scrapings from the inoculated volunteers. Examination of Thygeson's own conjunctiva and of his slides convinced me that he was right in his conclusion. This was that the elementary bodies found in inclusion blennorrhea represent the active form of a virus which passes Elford filters. Dr. Tilden and I were able to confirm Thygeson's experiment fully with regard to inclusion blenorrhea, finding inclusion bodies on the conjunctiva of sphinx-baboons inoculated with Elford filtrates of our material.

Thygeson went on to similar filtration experiments with trachoma, which were equally successful on the conjunctiva of the baboon and at least one human volunteer, Dr. Richards. Dr. Tilden and I have failed to reproduce these results with trachoma, but this is to be explained by the fact that our material did not contain large numbers of inclusion bodies.

In view of Thygeson's work, there seems to be no doubt that the inclusion and elementary bodies are elements of a virus. The virus which produces trachoma is identical in morphology with that which produces inclusion conjunctivitis, but each virus produces only its own specific disease.

They may be compared to the viruses of variola and vaccinia. More work has been done on trachoma, and an effort has been made by Cuenod and Nataf and by Busacca to identify the virus of trachoma with the Rickettsia group, of which the viruses of typhus and Rocky Mountain fever are members. It cannot be said that their evidence is conclusive. No practical deductions bearing on the treatment of trachoma have, as yet, come out of Thygeson's work, but it must be considered, certainly, as one of the most important recent advances in ophthalmology.

Detachment of the Retina

Detachment of the retina has always been one of the bugbears of Ophthalmology. True idiopathic detachment was practically uninfluenced by treatment, almost never healed spontaneously and since it often affected both eyes, especially in persons with myopia, was a not uncommon cause of blindness. Jules Gonin, Professor in the little university of Lausanne, Switzerland, became convinced in 1904 that small holes or tears in the retina occurring as the result of cystic degeneration or of trauma, were the cause of retinal detachment. As he conceived it, such holes allowed the vitreous to collect beneath the retina and separate it from the choroid. He found such holes in nearly all cases of idiopathic detachment in which the entire retina could be seen.

The idea had been suggested before, but it remained for Gonin to prove it by an operation designed to close the retinal hole, or to seal its edges to the choroid by scar tissue. His first operations were reported in 1919 and by 1931 he had collected three hundred cases, with healing of the detachment in 66 per cent of cases operated upon within the first three months of the detachment.

What he did was to localize the hole carefully, penetrate the sclera and choroid in the region corresponding to the hole and insert the tip of a red-hot paquelin cautery in the scleral opening. When only one hole was present and localization was successful, a scar resulted which sealed down the edges of the tear. Part of the sub-retinal fluid was drained through the scleral opening and the rest was absorbed by the choroidal vessels. If the detachment had not existed too long, vision returned in the previously detached area, and if the macula had not been involved, was often normal or nearly normal.

There were certain objections to Gonin's original method. As he told me himself, when the holes were very large, or when the retina was detached at the periphery, it was easy to localize the hole, but not easy to close it. There were many cases, also, with more than one hole, only one of which could be closed by Gonin's operation. The use of electrocoagulation naturally occurred to a number

of ophthalmologists. Larssen and Weve employed large electrodes for coagulation applied to the sclera over the detached area. But this was often unsuccessful in producing the desired adhesive exudate on the surface of the choroid. Weve then employed needle electrodes with which the inside of the eye was submitted to coagulation. But each puncture allowed fluid to escape from the eye which became so soft that further punctures were dangerous or impossible.

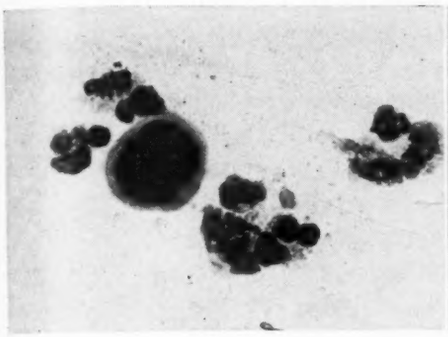

Fig. 1. Inclusion blennorhea.

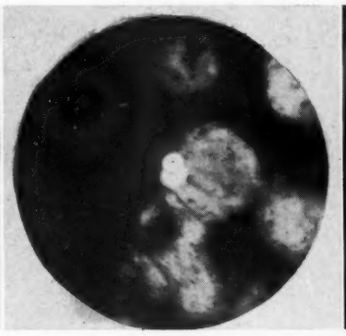

Fig. 2. Scars of coagulation.

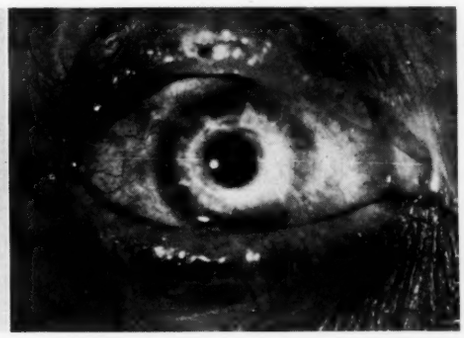

Fig. 3. Result of corneal graft following burn.

Safar of Vienna, and Walker of Los Angeles, about 1932 to 1934, devised small pointed electrodes which were left in the sclera after each coagulation until the whole area surrounding the hole and in some cases the area of detachment, was covered with areas of coagulation, when all the electrodes were removed. This method is the one now generally employed, with the addition, in certain cases, of electrolysis with current of low voltage but high frequency delivered by the very fine needles of Vogt or Walker. With this method results are good in from 50 to 75 per cent of cases, which means that the detachment is healed and vision returns in the affected area.

Vision is best in cases operated upon early, before the macula has become detached. When it has been detached for only one or two weeks or possibly even a few days, central vision remains poor but the peripheral field is good and with vision of 20/200 or 20/100 patients are able to do many kinds of work. There are certain conditions which make the prognosis unfavorable. If the detachment has been allowed to go for longer than six months the chance of a good result is poor, especially if more than two-thirds of the retina has become detached. After one year the chance is usually so slight that operation is not justified. Pischel reports two successful cases which had existed longer than this, but most of us have not been so fortunate. My oldest case with a successful result was in a young man of twenty-four in whom both eyes had been involved for about nine months. In one eye the first operation was successful, vision being 20/25. In the other eye recurrences took place after two operations but the third was successful with vision of 20/50. The result has remained good in both eyes with 20/20 and 20/25 twenty-four months after operation (Fig. 2). When the hole is very large, with the edges curled far over upon themselves or when, as in two cases I have seen, the upper half of the retina has fallen down over the lower half, there is little or no chance of a good result. In persons past the age of sixty-five, for some reason, the reaction following coagulation may not produce enough adhesive exudate to close the hole and in such cases the result is often disappointing when other circumstances appear favorable. The same is true in cases of very high myopia, where also multiple holes are apt to be present. I recently had a recurrence in such a case a year after successful operation on the only remaining eye, due to a second hole having developed on the opposite side of the retina.

It may be stated that in persons past the age of sixty-five in whom the other eye is normal it is often well to advise against opera-

tion, while when the only good eye is affected, one has no choice but to advise operation except under especially unfavorable conditions.

In a series of thirty-three cases results were about the same as that of most experienced operators, 48 per cent of all cases operated upon and 60 per cent in those operated upon within the first three months being healed. They have been about the same in a larger number operated upon since this report. The disappointments, when they occur, are sometimes heart-breaking, when the only remaining eye is involved. I have a patient now, a girl of twenty-eight, with very high myopia and multiple holes appearing after every operation, whom I wish I had never seen and who undoubtedly reciprocates the feeling. But the good results are worth it, and occur often enough so that an operation for retinal detachment must be considered the greatest practical advance in ophthalmology since the first filtering operation for glaucoma was performed by LaGrange in 1906.

If operation is to be advised it should be performed at the earliest possible moment, many persons having lost their only chance by prolonged trial of bed-rest, sweats, salt injections and other obsolete and ineffective methods.

Corneal Grafts

Keratoplasty, or restoration of vision to eyes with dense corneal scars by grafts of normal cornea, has been for many years a dream of ophthalmologists. For many years it remained a dream, since grafts of the cornea from animals always became opaque, and grafts of the whole cornea, although remaining fairly clear in a few cases, were followed by glaucoma and loss of the eye. von Hippel devised a spring-driven trephine cutting discs 5 mm. in diameter with which only the central portion of the cornea, including the scar, was removed and replaced by an exactly similar disc from another human eye enucleated for disease not affecting the cornea. With this instrument Ascher and Elschnig of Prague, Friede of Jägersdorf and a few others had reported a number of successful grafts prior to 1925. Doubts of the possibility of success were natural because of the behavior of heterografts in other parts of the body. Skin grafts, for example, will grow on other parts of a person's body, but not when placed on another person where they are absorbed and replaced by scar tissue. Conditions are different, however, in the cornea which has no direct blood supply but is nourished by lymph from the surrounding sclera and conjunctiva. The epithelium of a corneal graft is cast off and replaced by growth of epithelium from the surrounding cornea of the host. Its stroma, however, when circumstances are favorable, remains relatively clear and is nourished through its pre-existing lymph spaces by those of the host so that it remains clear These requirements of circumstances are exceedingly exacting, however, and it is not surprising that many ophthalmologists obtained failures with the method and abandoned it. In recent years the work of Tudor Thomas in England, Filatow in Odessa and Castroviejo in New York has conquered certain technical difficulties and has increased the percentage of successful grafts to such a point that keratoplasty must now be considered an operation of practical importance. Thomas employed the method of trephining, but used a trephine 2/10 mm. larger for the opening in the host's cornea than that employed for the graft, since the opening became smaller when the aqueous was allowed to escape. He devised a special method of suturing to hold the disc in place.

Filatov devised a special trephine with a blade to protect the lens from injury, and found that the cornea of cadavers, when preserved at 5° C could be successfully employed several days after death. Instead of sutures, he employs an everted flap of conjunctiva to retain the graft in place. He has certainly performed more keratoplasties than anyone in the world (205 between 1923 and 1936), and in his last paper reports 70 per cent of clear grafts in favorable cases.

Castroviejo since 1931 has developed an entirely new method of making the graft, somewhat similar to one used by Ebeling and Carrel for experimental purposes, but different in details. The square graft is partially cut by parallel knife-blades in a holder, the

cuts being finished by special scissors and keratome. It is held in place by sutures placed in the cornea itself. He has employed the cornea of still-born infants with success, and insists that the cornea used for the graft must in any case be entirely free from disease and not taken from such eyes as those removed for chronic glaucoma. The eye of the donor, if a clear graft is to be expected, must be free from adhesions of iris and must present some clear cornea in the area which is to surround the graft In other words, eyes with totally opaque and vascular corneas are not suitable for the usual graft, while eyes with a central scar surrounded by clear cornea are ideal. Eyes with scars of interstitial keratitis most frequently present the desired conditions. Almost equally favorable are eyes with blood-staining and extreme keratoconus. Healing of the graft may be expected in all cases with this method and where conditions are favorable a clear graft permitting useful vision may be expected in 50 per cent of cases. (Later reports indicate 75 per cent in favorable cases.) The technic is exacting as the lens must not be wounded and the graft must fit perfectly, It requires previous practice on animal eyes. I have seen some of Castroviejo's grafts and his slides showing clear grafts permitting vision of 20/20 to 20/40. In other cases vision was considerably less, but much better than before operation. I have seen clear grafts in the clinic of Imré in Budapest and another in the Elschnig clinic at Prague. My own experience has been relatively small. I have employed the trephining method with Filatov's flap and later with corneal sutures. All my few grafts (about fifteen) have healed in place but some were performed on unfavorable cases, so that the visual results were not comparable to those of Castroviejo and Filatov. My best result, shown in Figure 3, was in a case of corneal burn with vision of 5/200 one year after the burn but before the Keratoplasty. The cornea of an infant dying at the age of five days was employed for the graft. Vision is 20/50 and is still improving. The method which we have found most practical is one devised by Castroviejo. It is much simpler than his square graft which latter method Castroviejo prefers in most cases. Castroviejo's trephine is employed, embodying a plunger through which a thread can be placed. This thread, with which a bite has been taken into the central area of cornea to be removed from the host, is used for making traction on

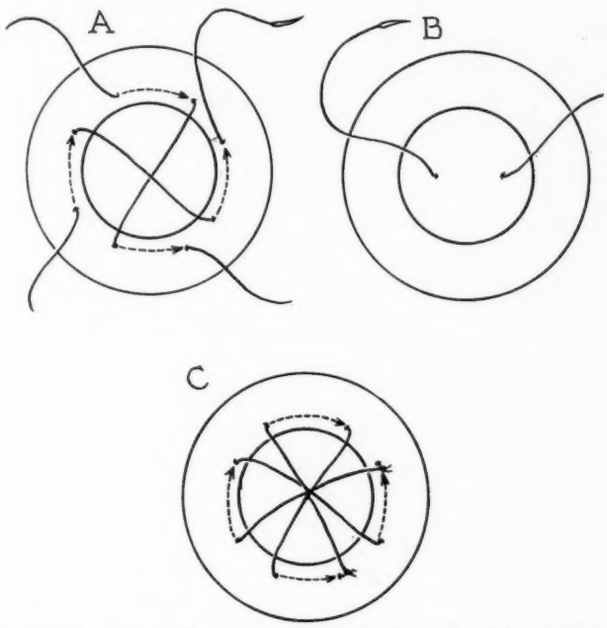

Fig. 4. Sutures for keratoplasty with the Castroviejo trephine.

the disc which prevents the lens from being injured. When the trephine penetrates, as it often does, before the disc is completely cut, the trephine is removed, sparing the thread, and traction is continued until removal of the disc with scissors is complete. The disc is held in place by two fine corneal sutures placed before the disc is cut (Fig. 4). Keratoplasty, while capable of producing some dramatic results, requires a much more complicated combination of circumstances and technic than the operation for retinal detachment.

It is not one which will be performed, at least for the present, by a large number of ophthalmologists. It does represent a definite advance in surgery, however, and will undoubtedly be performed more frequently in ophthalmologic centers in the future, since it offers the only hope of improvement in certain cases. The reason one hesitates to even mention keratoplasty is that uninformed lay persons grasp at the idea as a cure for all kinds of blindness.

The operation is confused with grafting of the whole eye, which of course, has been performed

with success only in certain lower amphibians. In other words it is applicable only to certain patients, all of whom have already a normal posterior segment, with a certain amount of vision through a partially opaque cornea. This can often be improved by the operation and in some cases the improvement amounts to the difference between almost complete disability and useful vision.

I have tried to describe these recent contributions to the practice of ophthalmology in such a way that they may be compared with advances in other branches of medicine. There is no point in making the comparison too specific. But it does seem that enough has been done in our specialty during the last ten years to make it worth while continuing in it. There is still enough to be done to encourage young physicians with good minds who are interested in preparing for the specialty.

Thanks to some of the recently founded ophthalmological institutes it is now possible to obtain as good training in America as anywhere in the world. I feel that some of the Americans now being trained are destined to perform work in theoretical and practical fields in these institutions which will make the next ten years of ophthalmology as interesting as those which have just come to an end.

CURRENT COMMENT

"The physician who wants his son to succeed him is faced with the expense of a very expensive education over a ten-year period following high-school graduation. At some time during this period the handwriting on the wall indicates that the practice of medicine will be socialized. Thus, the reward for the father's financial burden and the son's long years of study will be the privilege of a political job, subject to political dictation, and with paltry remuneration.

"Not a very pretty picture, is it? How many physician-fathers will want it for their sons? It is true that a physician's greatest reward is the privilege of service and many hardy souls will move heaven and earth to secure this privilege regardless of its discouraging outlook, but many others who might have become great healers will be frightened off. There is an old bromide that it is darkest before the dawn. Let us pray that dawn is about to break."—F.C.S., writing on "What Shall We Do for Our Sons?" in the April issue of *The Medical World.*

Pregnant Diabetic Women

Pre-Natal and Post-Natal Care*

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Pre-Natal Care

■ HOWEVER mild the diabetic state may appear during pregnancy we must not make too light of it. Each patient requires individual care and adjustment of her diabetes. **We should not treat the pregnant diabetic woman as a member of a group but as an individual.** It would be unjustifiable to subject a mild diabetic to the rigid care of a severe diabetic because much harm may result from it either to the mother or fetus.

A diabetic woman found to be pregnant should be hospitalized at once for complete stabilization of her diabetes. This means a complete physical and laboratory examination and correction of any abnormalities to insure proper control of the patient's diabetes and a more favorable fetal and maternal outcome.

The diet should be adjusted not only to meet the demands of the mother with all of the essential nutritional factors but also to meet those of the developing fetus. The growing fetus takes from the maternal circulation essentials for its development.

Some investigators[5] are inclined to believe the utilization of maternal blood sugar or the hyperglycemia by the fetus is responsible for the improvement of tolerance that occurs in the latter part of pregnancy and in bringing about a large fetus. . However the utilization

*From an address before the General Assembly of the Michigan State Medical Society, Thursday, September 21, 1939.

by the growing fetus of the essential elements may be so great that the mother may be exposed to disturbances of vitamin deficiency as well as to loss of minerals and tissue reserves. The consequences of these losses or dietary deficiencies to the mother, may bring about certain of the toxemias associated with pregnancy and childbirth.[34] This means a diet rich in vitamins and minerals must be supplied.[25] We also feel a diet rich in carbohydrate will better insure the patient against ketosis by providing for the increase in metabolism during pregnancy, as well as for the child's (fetus') glycogen needs and the prevention of any tendency toward hypoglycemia.

A diet supplying 25 to 30 calories per kilogram of body-weight has been adequate to supply the body needs; thus one (1) gram of protein per kilogram of body weight with a moderate amount of fat and rich suply of carbohydrate. A ratio of carbohydrate to fat. 1.5:1 has been sufficient and in some instances of 2:1. A general average and safe diet has been 60 grams of protein; 80-90 grams of fat, and 150-180 grams of carbohydrate. We advocate an extra feeding, 15-20 grams of carbohydrate at a late evening meal or upon retiring. This is more or less a general habit among the non-diabetics and there is no reason why the diabetic should not have the same privilege. It means better cooperation on the part of the patient.

The blood sugar level should be maintained as near normal as possible. Of course the time interval is of paramount importance. In our group we obtained fasting and post-prandial (two hours after meals) blood sugars. Either one is repeated depending upon condition of patient as often as necessary to maintain the blood sugar level as near normal as possible. Recently we have placed more reliance upon the post-prandial blood sugar estimations.[26]

Ordinary insulin is administered to obtain the normal blood sugar level.[27] As to protamine zinc insulin we advocated it only in those patients requiring more than 40 units of plain insulin and seldom alone, because of the dangers of hypoglycemic reactions during the interval the patient does not eat her regular meal.

First Trimester.—However, during the first trimester, nausea and vomiting may prevent the patient from adhering to her regular prescribed diet and insulin. This of course increases the dangers of acidosis. Blood sugar, carbon-dioxide combining power of the blood plasma, and urea-nitrogen estimation should be done immediately to determine the chemical state of the patient. If acidosis develops, treatment should be given as in non-pregnant diabetic patients. Efforts should be made to alleviate the nausea and vomiting by supplying the carbohydrate portion of the diet in the form of liquid, as fruit juices or dextrose, disregarding temporarily the protein or fat content of the diet. If the patient is unable to take fluids by mouth, glucose intravenously should be given with the necessary ordinary insulin dose and the procedure repeated if the condition warrants. When nausea and vomiting cease, feeding by mouth the regular prescribed diet should be attempted, with the insulin governed by the level of the blood sugar.

While the patient is being stabilized for her diabetes during the first trimester, a careful examination should be made for foci of infection and their immediate care when found. Special search should be made for focal infection in the teeth, skin, as well as the genito-urinary tract.

The cardio-vascular system and the gastro-intestinal tracts as well should be carefully examined for any abnormalities. Bear in mind that the nearer to normal the patient's carbohydrate metabolism the better the outlook for the fetus and mother. Also that toxemia and eclampsia are 50 times more prevalent in the pregnant diabetic than in the pregnant non-diabetic.[23]

Second Trimester.—During the second trimester there is generally little or no change in the diet or insulin dose. However we must not put too much reliance in generalities. I am a firm believer in frequent blood sugar estimations (post-prandially and fasting) if necessary—at least every three to four weeks, during which time an opportunity is given for general examination of the patient's diet, complaints and physical condition. It is only through this procedure that we are able to detect insidious blood sugar rise or acidosis.

Third Trimester.—During the third trimester a change of tolerance may be noted. In this

period great care should be exercised in the dose of insulin because improvement in carbohydrate tolerance may occur and subject the patient to hypoglycemic reactions. It is not uncommon to find a lowered renal threshold during this trimester which may be misleading if urine sugar examination is solely depended upon in treatment. However, we may have in this interval decreased tolerance or factors inducive to acidosis as increased metabolism, reduced alkali reserve and glycogen store which require increase in insulin dose.

Some clinicians are of the opinion that the growing or developing fetus during the latter months of pregnancy creates a daily extra demand for carbohydrate, and advocate at least 50 grams daily in the patient's diet. This of course depends upon the individual case. However, we have been able to maintain most of our patients upon the same diet throughout the pregnancy period. We cannot too strongly advocate the necessity of careful observation for change of carbohydrate tolerance, signs of toxemia or eclampsia. Smith and Smith's[29] observations of the prolan-estrin imbalance typical of toxemia between five to seven months, is of interest in implicating the pituitary. They have been able to observe this imbalance 6 weeks before the clinical manifestation of toxemia.

Labor

At the onset of labor the patient's diabetes should be well stabilized, for labor may give rise to certain complicating problems, *i.e.*, (1) prolonged labors whether normal or induced, may cause serious disturbances to the mother as well as fetus; (2) acidosis or coma, because of the tendency to glycogen reserve depletion in providing carbohydrate necessary for the energy of labor.

Choice of Delivery.—The method of choice of delivery of the diabetic pregnant woman is of course dependent upon the state of the diabetes as well as upon the judgment of the obstetrician. The obstetrician should not take the whole responsibility, he should work with the internist. If the patient is allowed to deliver spontaneously or possibly by labor induced prematurely, the carbohydrate portion of the diet should be given in the form of milk or orange juice by mouth or dextrose intravenously with the necessary dose of insulin. The purpose of course is to help avoid acidosis by increasing the glycogen reserve of the patient.

Cesarean Section.—There has been much controversy concerning the delivery of the pregnant diabetic woman by Cesarean section. Some physicians feel that neonatal mortality rate will be lowered by Cesarean operation and advocate it in all deliveries as soon as the baby is viable. Advocates of Cesarean section describe a gloomy outlook in labor for the pregnant diabetic woman —(1) extra burden of pregnancy, (2) mechanical strain of labor, (3) large baby; (4) toxemia of pregnancy causing death of child as well as malformation; (5) the possibility of acidosis or coma; (6) and other possible serious pathological complications to mother or fetus. However, by Cesarean section around the 37th week this gloomy picture may be alleviated to a large extent and the woman's chances of having a live baby increased. As an internist I am not in favor of Cesarean section routinely in all cases of diabetes. With proper control of the diabetes even the severe ones have been carried to term for normal delivery, providing however, there is no disproportion between the size of the fetus and pelvis or existing complications.

If Cesarean section is decided upon, the same procedure of diabetic preparation as in any surgical operation, especially in supplying the carbohydrate portion of the diet should be advocated. The anesthetic of choice is spinal or nitrous oxide and oxygen.

Post-Natal Period

Carbohydrate Tolerance.—There are numerous conflicting explanations for the etiology of the increased tolerance or hypoglycemic states after delivery. Probably the work of Widmark and Carlens[36] has attracted much attention in which they claim the hypoglycemic state is analogous to milk-fever in cows. The condition is corrected by injection of glucose or by inflation of the mammary gland, thereby stopping the secretion of milk, and increasing the blood sugar—by preventing the withdrawal of circulating glucose by the mammary gland for the formation of lactose in the milk. Markowitz and Soskin's[15] experiments also substantiate the work of Widmark and Carlens. However Lambie[11] expresses doubt relative to lactation as the responsible factor in

causing hypoglycemia, because in one of his cases in which the hypoglycemia occurred the patient had very little milk in the breasts and never suckled the child. One of his explanations for the increased tolerance that may occur for a short while is the possibility of restoration of the carbohydrate reserve after their exhaustion by labor. This became evident he feels by the second week post-partum when a reduction of the tolerance occurred, greater than it had been since the 7th month of pregnancy.

In our studies we not infrequently found an increased carbohydrate tolerance of the mother within a few days after delivery. Thus in case of E. C. aged forty-one, who had eight pregnancies, five living children, diabetes developed one year after the fifth normal pregnancy, following a pelvic operation. Her blood sugar during the sixth pregnancy before delivery was 264 mg. per 100 c.c., the day following delivery it was 210, and within seven days it was 116 mg. per 100 c.c. This reduction occurred without the use of insulin. However, we occasionally found a decreased tolerance not only in different patients but also in the same patient during another pregnancy. In the above patient at a previous pregnancy she was admitted in premature labor. The blood sugar before delivery without insulin was 174 mg. per 100 c.c., two days after delivery it was 244, and twelve days after delivery it was 200.

However we have had patients upon insulin in whom it was necessary to reduce the insulin within the first few days of the puerperium in order to avoid hypoglycemic reactions. Skipper[28] also speaks of increased tolerance following delivery by noting insulin reaction in seventeen of the twenty-three patients who were receiving insulin at delivery. Enormous reduction in insulin dose was necessary to avoid a severe hypoglycemic reaction within a few days after delivery in a few of Lawrence's[12] cases.

Management of Puerperium.—Following delivery of a child a change in the carbohydrate tolerance may occur in the mother necessitating an increase or decrease of insulin dose. It is not infrequent to find that the glycosuria present during pregnancy disappears after labor, and misguides the physician into believing that the so-called "diabetes of pregnancy" has disappeared. However, the absence of glycosuria may result from the rise of the renal threshold. Our observations support that when diabetes exists during pregnancy it also persists later, even though in some instances urine sugar examinations gave no information as to the true state of the disturbed carbohydrate metabolism. We cannot too strongly advocate the value of frequent blood examinations following delivery. In the absence of complications we advocate blood sugar estimation for a period of a week or ten days, depending, however, upon the diabetic state. We must not overlook the dangers of sepsis that may occur as the result of prolonged labor or damage to cervix or perineum as well as the risk of acidosis.

Lactose or milk sugar in the urine usually occurs in the last weeks of pregnancy or during lactation. The amount in the urine is of no pathological significance and rarely exceeds one per cent. Great care must be exercised in differentiating lactose from dextrose since both reduce Benedict's and Fehling's solution. However, differentiation can be made by appropriate laboratory methods.

Carbohydrate diet after delivery should be liquid for the first twenty-four hours; then changed to solid according to the prescribed formula. Insulin must be judged by the blood sugar levels.

Infant mortality following delivery is high. Infant mortality is depended upon the control of the condition in the mother. One must realize that the child previously lived in utero under abnormal metabolic conditions. A newly born baby of a diabetic mother requires a little more time for its metabolism to re-adjust itself than a baby of a normal mother.

It is advisable if conditions warrant to make blood sugar estimation of all babies born of diabetic mothers. Hypoglycemia in the new born is to be feared, and for this reason many physicians advocate routinely glucose by mouth, or 5 c.c. of 10 per cent solution of dextrose given into each buttock,[21] its repetition depending upon the blood sugar level and condition of the child. We however advocate it only when indications arise, as convulsions or muscular twitching, vomiting or cyanosis.

Asphyxia may result from a state of failure of adaptation of the cardio-respiratory system

to extra uterine life.[32] According to statistics asphyxia causes 30% of child mortality. Stone[32] claims, asphyxia in most cases presents a reaction to abnormal conditions of late pregnancy or labor. In some instances to establish respirations, mechanical or cardio-respiratory stimulants may have to be employed. Placing the child in an incubator of oxygen has proved successful. Stone recommends 5 to 10 per cent CO_2 in oxygen.

A few physicians do not approve the diabetic mother nursing her child because of the possible danger to the mother's diabetes. However, Peckham,[18] Wilder and Parsons,[37] Skipper[28] and others see no apparent harm in lactation and advocate it, if the diabetes is adequately controlled. If the child loses weight artificial feeding may be resorted to. Improvement of the carbohydrate tolerance or diabetic state is occasionally observed in the mother when she nurses the child, probably by a conversion of the maternal circulating sugar to lactose in the breast. Great care should be exercised in the insulin dose during lactation since the improvement of tolerance or diabetes may not infrequently subject the mother to hypoglycemic reactions.

Weaning the Baby

The utmost care should be exercised in the management of the mother's diabetes when weaning the child. Probably the cessation of withdrawal of sugar from the maternal body to form the lactose of the milk may be a responsible factor for the increased hyperglycemia or acidosis that not infrequently occurs during weaning. **During this interval the mother's diabetes must be closely observed by frequent blood sugar examination.** This is more real than apparent when we realize two instances of breast fed babies, one of a mother aged twenty-four, following a normal delivery of a child over eight pounds, the mother nursed the child for a period of five months. At the end of this time, she was admitted to our metabolic ward in diabetic coma with a blood sugar of 1850 mg. per 100 c.c. and a carbon dioxide combining power of 13; however she recovered. Within a year after her coma incident she returned to our metabolic service and was delivered of a child weighing 4 pounds 1 ounce who is at present living and well. The other case was that of a woman aged twenty-seven years who within two weeks after nursing a child fifteen months, was brought to our metabolic ward in diabetic coma but soon recovered. She also returned at a later date to our metabolic service and was delivered of an 8¼ pound baby. The child is at present living and well.

Many advocates of sterility base their opinion upon the possible harmful effects of frequent pregnancies to the diabetic woman, as well as upon the increased likelihood of the offspring developing diabetes or being "hereditary carriers of the disease." We have had a few instances of diabetic mothers with no added damage to the disturbed carbohydrate metabolism after one or more still-births, miscarriages or even severe coma, giving birth to a child that survived, apparently normal.

Is sterilization their "cure" for diabetes—denying the woman her instinctive desire to have a child? I am of the opinion that if a diabetic woman wishes to have another child further harm will not follow if the diabetes is well controlled.

Summary

1. Fetal mortality has improved little since the pre insulin era in spite of modern care; though the maternal mortality has decreased.

2. Many of the diabetics who had diabetes in childhood now live as a result of insulin with improved endocrine functions. A few of these have been able to have living offspring.

3. Carbohydrate tolerance during pregnancy is variable, but in many instances it may be diminished during the early part and improved in the latter period.

(a) Fetal insulin may be a factor for the improvement, though many investigators are inclined to attribute it to the increased consumption of the maternal glucose by the fetus.

4. Close coöperation between the internist and the obstetrician in care of all pregnant diabetic women is most desirable.

(a) Hospitalization is advised when pregnancy first occurs for complete stabilization and study of the diabetes.

(b) Patient should be observed every

three to four weeks throughout the whole pregnancy period.

(c) Diet must supply all the essential nutritional factors:

(1) We advocate higher carbohydrate diet.

5. Glycosuria as an index of the hyperglycemic level is not to be depended upon for the renal threshold has been found to be variable in many instances not only in various patients but in the same patient.[24]

(a) Much harm may occur to the diabetic woman or fetus by placing too much reliance upon urine sugar as related above.

6. More reliance should be placed upon blood sugar examination (fasting and post-prandial). We prefer post-prandial two hours after meals) to fasting blood sugar estimations for index of the patient's oxidizing power, though both estimations are occasionally necessary in protamine and ordinary insulin patient.

7. Protamine insulin alone is not advocated to control blood sugar levels during pregnancy and puerperium because of dangers of hypoglycemia reaction. Ordinary insulin is preferred.

8. At time of labor patient should be stabilized so as to meet any emergencies.

(a) Choice of delivery should be judged by the diabetic state, obstetrician and internist.

9. Cesarean section is advocated only when indications arise.

10. Mother should be carefully observed during puerperium for acidosis or coma as well as hypoglycemia.

(a) Lactation is advocated if there are no contra-indications.

(b) Child immediately after delivery should be observed for hypoglycemia reactions.

(c) When weaning child the patient should be carefully studied for increased hyperglycemia or acidosis.

11. Sterilizing diabetic women is not advocated by the author.

Conclusion

1. We advocate examination for diabetes mellitus routinely in all women who have given birth to children above average weight, or had still-births and miscarriages.

(a) These measures will help detect the mild diabetics and prevent many of the pathological disturbance of diabetes.

2. More reliance upon blood sugar estimation than urine sugar for control of diabetes. Post-prandial (two hours after meal) blood sugar estimation is a better index of the oxidizing power of the diabetic than lasting though both are often necessary in judging protamine and insulin dose of the patient.

3. Such measures will help better control diabetes and aid in reducing the prevalent increased fetal mortality as also unfavorable disturbances to the mother.

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Undulant Fever

Outbreak at Michigan State College*

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■ During 1937 and 1938, there had been more and more cases of undulant fever on Michigan State College Campus. This was due in part to simplified diagnostic methods; but many acute cases appeared until it became very evident that a "leak" was occurring in the Bacteriological laboratory. It is true in taking a large group of inexperienced students into a laboratory there is bound to be awkward and improper handling of cultures, but the laboratory officials insisted that students were never given pathologic organisms. In 1938, a very severe case occurred in a student who was engaged to wash glassware on the top floor of the building. He never was given dishes until they had been sterilized and yet he developed a severe case of the disease. In June of 1938, another student whose work was to empty waste-paper baskets and clean up the offices developed a severe case which incapacitated him most of the summer. I firmly believe that if summer vacation had not intervened just at this time that our epidemic would have occurred much sooner. However, on December 16, 1938, came the first case and in the month that followed occurred an outbreak which put our college on the map (bacteriologically speaking) and caused her name to be flung in screaming headlines from coast to coast. Tabloids scented material to make a real sensation. Anxious parents wrote, came by train and flew to make sure their children were safe.

The seriousness of this outbreak has not been overestimated. It cost one boy his life. Upwards of fifty others have been deprived of their time for varying periods of from three weeks to seven months and last, but not least, when budgets are such a matter for worry, it cost the College as nearly as we can estimate, a cool $20,000.

On December 16, as before stated, the first case occurred. This, like most undulant fever at its early stages, was diagnosed influenza. There is no distinction in the two conditions either subjectively or clinically unless one is able, when first seeing the patient, to detect an enlarged spleen. But unlike influenza the temperature failed to drop after 24 to 48 hours and it was then that the more serious disease was discovered. This case was extremely mild; recovery occurred in about three weeks but a positive blood culture was obtained for Brucella and the strain was found to be Melitensis. Cases followed in rapid succession at the average rate of more than one each day until something like fifty cases in all were reported. The papers insisted on making this number larger because of the fact the State Health Department included in their figures all cases diagnosed during the past year. Besides those cases occurring in the Student body, a plumber who installed an autoclave, a delivery boy whose only contact in the building was in making deliveries from the Stores Department and two or more laboratory workers developed the disease.

Because of crowded conditions and insufficient help at the College Infirmary it was impossible to obtain as detailed histories as desired or to follow the patients as closely with laboratory procedures as we wished. However, we did our best with limited facilities. We feel certain that there are no misdiagnosed cases in this group as nearly all have yielded at one time or another a positive blood culture.

*Read at the annual meeting of the State Medical Society at Grand Rapids, Michigan, September 20, 1939.

Symptoms

Symptoms of this disease, as before stated, resemble or are identical with influenza. In this group the following list of complaints are arranged in the order of their frequencies:

All complained of fever and either frank chills or definite chilliness, sweats (profuse and drenching), headache, backache and muscular pains, malaise and fatigue, nausea and vomiting, loss of appetite, loss of weight, vertigo and blurring vision, sore throat and dry cough, inability to remember or think clearly.

Ordinarily fever is not considered a symptom but you must remember that many of these students were in the Veterinary Science School and made their own observation and diagnoses before we saw them. Others had been under the care of home physicians during the Holiday vacation and thus were aware of temperature elevations. The vast majority, however, complained of periods of overcoming and stifling body heat.

Chills were outstanding. These in most cases were not light but definite rigor which lasted from ½ to 1½ hours. Following these, there was marked diaphoresis. It was frequently necessary to completely renew bed linen as often as three and four times daily. Temperature often reached 105 degrees following severe chills.

Headache is one of the outstanding symptoms of undulant fever. During the past two years I considered a persistent occipital headache as almost pathognomonic of Brucellosis in Veterinary or Bacteriology students. In this group, however, severe frontal headaches were as frequent as were occipital.

Severe backache and pain down the legs accompanied by general muscular soreness occurred very frequently in the acute stage of the disease and was an outstanding symptom in each relapse.

Nausea and vomiting were usually associated with the chills. Several cases, however, had to be maintained on intravenous fluids for as long as fourteen days at a time because of persistent vomiting.

Loss of weight occurred in those cases who tried to wear out the infection and insisted upon attending classes rather than going to bed. This was marked. (Ten pounds per week in one case.)

Pharyngitis and a dry cough were presenting symptoms in only two cases; however, several patients were troubled a great deal with a non-productive bronchial cough during relapses while still in the hospital.

One case is interesting because I feel he represented a definite reinfection rather than a relapse. He was first diagnosed as a case of Brucellosis in the summer of 1938. With rest and treatment he apparently recovered satisfactorily but again developed symptoms along with this present group. He gave a history of having been in and out of the laboratory building during the time of the supposed dissemination of the infection. His course ran rather parallel with those infected in this group.

Diagnosis

I found the skin test to be most reliable in the early stages of the infection. In this group all cases had a more or less active skin reaction at the time of admission. For this test Brucellergin, the antigen as prepared in Huddleson's laboratory, was used. Formerly I considered only 48-hour reactions but in many of these cases the edema and redness would be practically gone at 48 hours. The test is now read both after 24 hours and after 48 hours. Every positive skin reaction does not mean a case of Brucellosis. It must be followed up with more confirmatory findings. Edema and often ascending lymphangitis with enlargement and tenderness of the axillary lymph nodes was frequently encountered.

Serum agglutination was often negative or present in very low titre in the early stages of the disease. However, within ten days it became positive in dilutions up to 1:600. All cases with positive skin tests who failed to quickly produce agglutinins were found to be due to individual sensitivity to the antigen and were not active cases.

The opsonocytophagic index is only a confirmatory finding. This is one of the things I found to be false in our conception of Brucellosis. All cases show varying degrees of opsonic activity but the test can in no way be considered a criterion for terming a case acute, chronic or cured. There were many cases

showing 25 marked cells who were running temperatures up to 103 at the time the samples were taken and other cases who, to the best of my opinion, were at least in remission, if not cured, with only 15-17 marked cells. (Huddleson's laboratory counts but 25 cells.)

If a high leukocyte count exists the patient does not have Brucellosis. Throughout this series counts ranged from 3,500 to 5,000, gradually increasing as the general condition of the patient improved. There was little change in the differential count until the patient began to improve, when large numbers of juvenile and stab forms were noted.

Physical examination revealed nothing except that at some time during the course of the disease all patients exhibited a splenomegaly ranging in degree from just palpable to three or four finger breadths below the costal margin.

The urine in a few cases, at the febrile heights, showed a one plus to two plus albumen, occasional granular casts and red blood cells—the picture of a mild toxic nephritis. This condition was fleeting in every case. There has apparently been no residual permanent kidney damage in any case.

The melitensis form of this disease compares in degree to the Abortus form much as typhoid compares to paratyphoid. It is a very severe toxic infectious disease. Many cases after two days' illness became so weak that they were unable to feed themselves, or to take fluids without aid.

Treatment

Early in the course of the disease, I learned the fallacy of treating an acute toxic disease by the injection of more toxin. Brucellin gave much trouble before I finally abandoned its use. Brucellin has a place in the treatment of chronic infections where stimulation of antibodies is needed but not in the acute stage.

Brucellosis is a septicemia and should be treated as such. The treatment should not differ from that in other blood stream infections.

General supportive measures are most important. Plenty of fluids and supportive blood transfusions were used as indicated. At first I tried to use blood from supposedly recovered donors whose names were furnished us by the "Brucella station." These were soon exhausted and regular donors were used with equally good results. Transfusions were the most effective measure. While not in any sense specific they gave the patient the necessary support. Aspirin and codeine were used very freely to relieve discomfort.

Sulfanilamide and neo-prontosil were tried but quickly abandoned. It seemed to increase prostration.

The results of sulfapyridine* were spectacular. One patient who had been running a daily high elevation of temperature dropped to normal in 36 hours and had a normal temperature for a period of two weeks; a much longer afebrile period than he had previously had. Several other cases responded in a like manner. All cases so treated relapsed. The administration of the drug was not properly controlled as I had no means of determining the blood concentration level of the drug and was continually hampered by the inability of the patient to retain the medication.

With but two exceptions, vomiting was very marked, and the necessary equipment to administer oxygen to control this condition was not available.

The blood picture was watched carefully during administration of this drug and without exception there was an increase in the total leukocyte count out of proportion to the possible dehydration present and a sharp rise in the stab and juvenile forms.

I believe this drug has definite possibilities in the treatment of the acute form of this disease.

In July four patients were yet at the hospital who were running periodic elevations of temperature.† **A convalescent serum was prepared from the blood of five recovered cases and administered to them. All reported a marked improvement in subjective symptoms.** I do not say that this serum cured these patients for they should have recovered spontaneously by this time. However, it did give them a very

*Furnished through the courtesy of the Merck Company.
†Convalescent serum was prepared in the State Health Department Laboratory at Lansing from cases which recovered earlier in the epidemic.

remarkable mental boost which they sorely needed after approximately five months of fever.

Probably foremost in our treatment was good wholesome food. It was truly surprising to see the physical state of these patients during remissions of the fever. They were alert, jovial and in excellent spirits. Only a few were below their normal weight when they left the hospital and many had surpassed any previous weight.

A fourteen-day afebrile period was set as an arbitrary prerequisite for dismissal. Many would relapse on the thirteenth day. About ten were released and had to return for further care but the majority were able to stay out after this period of time.

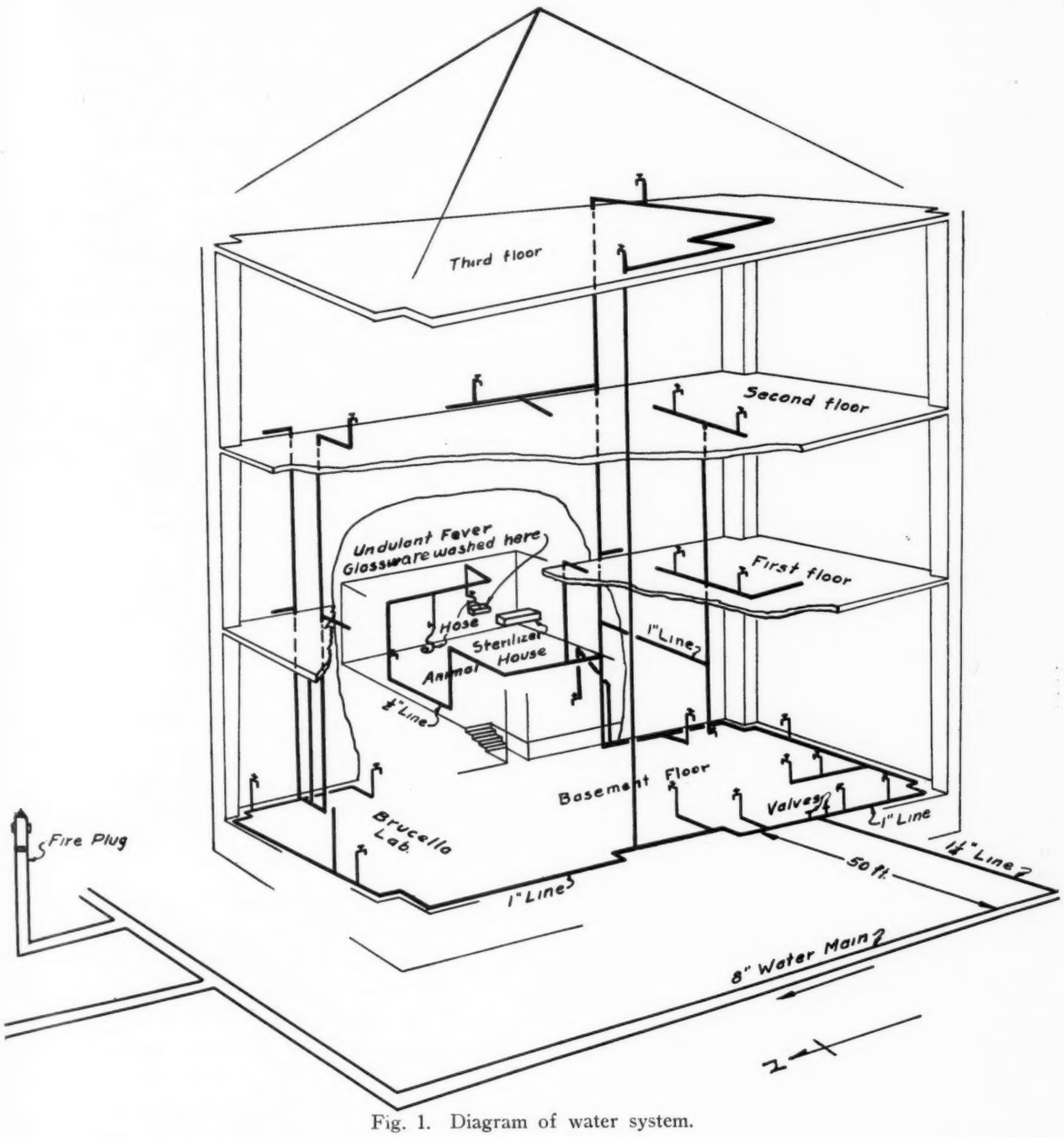


Fig. 1. Diagram of water system.

Complications

Complications in this series were few. Arthralgia of the hip joint was so common that it was considered almost part of the disease.

Radiographs showed no bone destruction. All recovered without disability.

One patient developed a right femoral phlebitis and a right pleuritis with a slight effusion which did not necessitate aspiration.

Orchitis occurred in one case and was bilateral. Culture of fluid from the epididymis did not yield the organism. Others complained of testicular pain but did not present any swelling.

A clinical diagnosis of pericarditis was made in one case. This was supported by x-ray study but no paracentesis was attempted.

Epidemiology*

Every case found to be infected with Brucella melitensis had been in the bacteriology building during the month of December.

The building is quite old and unsuitable architecturally for its purpose. Adaptation of the plumbing system to meet the demands of greatly augmented numbers of students during the past several years has greatly exceeded the capacity of the service. It will be noted that the building's water supply is obtained from the college distributing system through a 1¼ inch service pipe approximately 50 feet long. Immediately inside the building there is a T coupling diverting the water into two 1-inch lines which extend around the building in opposite directions but do not reconnect. One-inch risers serve the first, second, and third floors.

It was a custom of the Brucella laboratory to place discarded cultures contained in Petri dishes and culture tubes in copper containers of about 1 cubic foot capacity. These were packed full, a tight fitting cover adjusted, and placed in an Arnold sterilizer. At the end of one hour's exposure to steam the dishes were removed, media scraped out, and the glassware washed in a nearby sink. As a test of the effectiveness of this sterilization we carried out the following procedure: On removal of the copper container after one hour it was found that the glassware could be comfortably handled immediately and that the agar media was not even melted. It was obvious that the method was entirely inadequate for sterilization of cultures.

The custom followed in washing the glassware was as follows: After the media was discarded the glassware was put in a large dishpan in the sink, the dishpan filled with water, and after a period of soaking the glassware washed. A piece of rubber tubing connected to the faucet was used to prevent breakage. When the dishpan was filled this tubing extended below the surface of the water in the dishpan. The possibility of siphonage if a negative pressure obtained in the water system was apparent.

Demonstration of Siphonage.—By opening several faucets in the basement a negative pressure was produced in the faucet at the sink where the glassware was washed. A pressure recorder on the third floor showed a negative pressure equivalent to 2 inches of mercury when all outlets in the basement were allowed to remain open. A solution of fluorescine was placed in a container in the sink used for washing glassware and after a negative pressure was produced at that point the dyed water was siphoned into the water system. After the dye had reached beyond the riser pipes to the upper floors, the pressure was again returned to positive, and green water was obtained from every outlet in the building.

Referring to Figure 1 it will be noted that one of the riser pipes supplying the third floor is connected with the line supplying the sink where the glassware was washed. This allowed for more direct water communication between this sink and the third floor laboratory. Considerably more pipes would need to be traversed by contaminated water to reach the first and second floors. This fact may have been responsible for the higher percentage of infected students among those using the third floor than among those using the second floor.

A new sink and two autoclaves were installed in the building during December. The water main outside the building had been tapped for a service to a new building nearby. Thus, in addition to the possibility of negative pressure being created by the simultaneous opening of a number of outlets in the building, there were additional possibilities when the water was shut off during these installations.

Conclusion

The last patients left the hospital about August 15. To date none has reported back in relapse. The Brucella laboratory has been moved to isolated quarters and the plumbing situation corrected. Further outbreaks are unlikely.

*Credit for this report is given to Dr. Newitt.

HYPERTHYROIDISM INCREASES NEED FOR VITAMIN C

In conditions of over-activity of the thyroid the increased metabolism of the body is reflected in an enhanced demand for vitamins and mineral salts. In animals with experimental hyperthyroidism the administration of suitable doses of Vitamin C prevented a fall of muscle and liver glycogen and contributed to the well-being of the animal. Carrière, Morel and Gineste treated hyperthyroid patients with Vitamin C and found that those with mild or moderate degrees of the disease were benefited, while those in the more severe stages did not respond to the treatment. In hyperthyroidism, as in other states of increased metabolism, the greater demand for Vitamin C calls for a larger supply in the diet.—*Citrus Fruits and Health.*

The Electro-Stethophone and Recording Apparatus

For Fetal and Adult Heart

By Harry Kirschbaum, M.D.
Detroit, Michigan

HARRY KIRSCHBAUM, M.D.
M.D., Detroit College of Medicine, 1921. Fellow, American College of Surgeons. Member, Michigan Society of Obstetrics and Gynecologists. Senior Attending Obstetrician and Gynecologist at Woman's Hospital, Detroit. Member, Michigan State Medical Society.

■ THE electro-stethophone is a device which renders the fetal and adult heart sounds audible throughout an auditorium.

The recording apparatus will record these sounds on a phonograhic record, or sound film; so that a permanent record can be made.

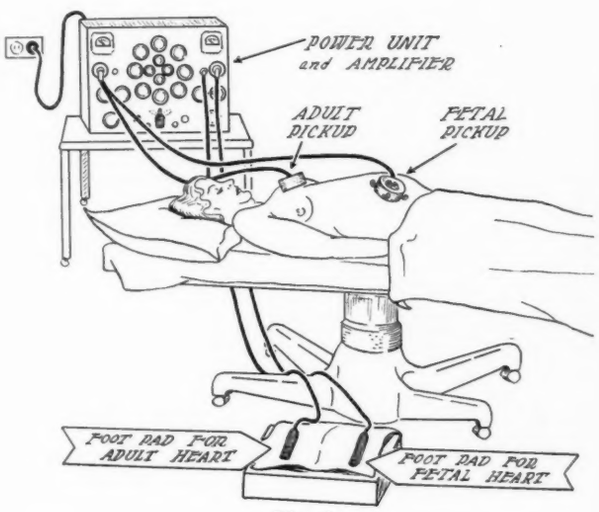


Fig. 1

To best amplify the fetal heart sounds, the *fetal pickup* should be over the point of maximum intensity. For the adult heart sounds, the *adult pickup* need not be over the precordium, but may be placed over the back or in the right axilla.

The machine may be turned on and off by merely approximating the foot to, or withdrawing the foot from the foot pad on the floor. The apparatus is spark proof, and therefore may be safely used in the presence of inflammable anesthetic agents.

Its uses and advantages are:

A. *For Fetal Heart Tones.*

1. Teaching students.
2. Listening to heart tones during labor.
3. While delivering, the fetal heart tones may be heard without disturbing sterile drapes.
4. Hearing the fetal and adult heart at the same time.
5. Listening for twin hearts simultaneously.

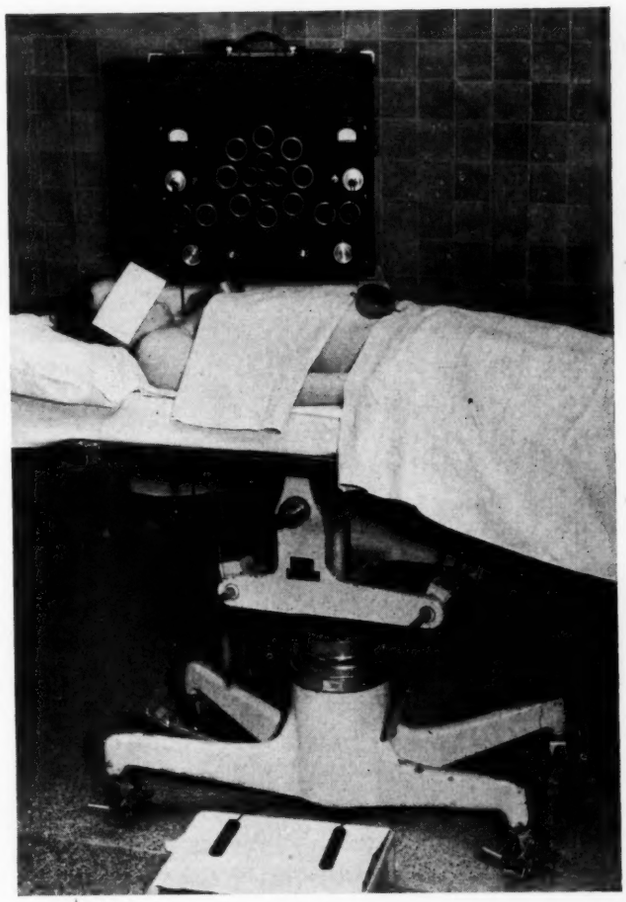


Fig. 2.

B. *For Adult Heart Sounds.*

1. For demonstration and teaching.
2. For experimental work.
3. For following the condition of the patient's heart during surgical procedures. (The surgeon or anesthetist turns the machine on and off at will, by placing his foot near or away from the foot pad.)

There will probably be more uses for the machine than are apparent at the present time.

EDITORIAL

"MISSED THE BUS"

■ The Commission on Graduate Medical Education has published a very complete volume containing their analyses of, and recommendations on various medical education problems. The avowed purpose is "to formulate the educational problems and principles involved in the continuation of medical training for a period of years after graduation and the adequate training of specialists." They have gone beyond that premise in recommending changes in the compulsory interne year's training, limiting the teaching of special technics for those who are to go directly into the specialties.

A review of the membership of the Commission is quite interesting. It is distinctly a commission of specialists and, to an overwhelming degree, professors from medical schools. A history of the medical development of these distinguished and learned men is not available, but, if there are among them any considerable number who have been in the general practice of medicine in communities where the health of the common people has been their responsibility, the memories of their problems at that time must have faded considerably.

Despite occasions in which the good old general practitioner is praised and commended, the conglomerate thought indicates this conception of a family doctor—only an agent to direct the patient, who has more than a common cold or acute enteritis, to the designated specialist. Quoting isolated paragraphs from a book of this nature is both unfair and unsatisfactory, however, it is safe to repeat that considerable emphasis is placed on the error of teaching special technics to the general interne. Any general practitioner who reads the section on interneships cannot but feel that the Commission has "missed the bus."

The general practitioner is the backbone of medicine in the United States. No matter what group of specialists decide otherwise, the curtailment of activity of the general practitioner will spell doom to the private practice of medicine. There are only a scattered few family doctors who are not seriously concerned with the welfare of their patients and thus will treat and advise them to the greatest good to the patient, referring when social and physical need indicate; but even those few who do not know their limitations are safer practitioners than the number of specialists who do not recognize their own limitations.

Economically, it is necessary that the man in the field be able to do most of the not-too-highly specialized services if he desires to make a living privately. Five years of medical training should give him this comparative ability. If it does not then it is undergraduate education that has failed and not the general practitioner.

Still more important, it is necessary that the general practitioner be trained to perform these services to save a large number of the people the necessarily higher expense of consultation with the specialist. Free and part-pay clinics in the larger cities cannot take the place of the well-rounded family doctor. It is not necessary to list the other phases of the practice of medicine which the Commission is seeking to change. May the time never come when the general practitioner is only soliciting agent for the specialist. For when that time comes, one of the greatest of private industries (according to a government attorney) will become a government bureau.

Nearly four-fifths of the practicing physicians in the United States are in general practice of medicine. Why a small part of the one-fifth should attempt to dictate the educational requirements of this very large majority seems a bit out of line. When the general practitioners will organize a similar commission and lay down the principles under which the man in the field can be best trained to serve the American people then will the democratic practice of medicine be guaranteed to the profession and to the country.

This group of specialists may well regulate the special training for specialists and no one can deny their capability and, perhaps, their right, but in outlining suggestions for general interneship they demonstrate their disregard of the problem of the general practitioner and tend to destroy the basis of the private practice of medicine.

President's Page

QUO VADIS

THERE lie before me seventy-five volumes, the contents of which make the history of our Society. They contain not only the formal transactions but the thought, the controversies and the aspirations of its members. As I read them I am proud of the Michigan State Medical Society and I count myself fortunate in having had the opportunity of playing a small part in the making of this history. I am grateful to the Society for giving me the opportunity, and I am most especially appreciative of the honor of being your president during this past year.

It is evident, as one reads the early volumes, that the physician of that day was little more than a medicine man, possessed of rare common sense, it is true, and conscious that in the realm of disease he was largely working in the dark. Medicine based on scientific facts, on bacteriology and chemistry and physiology, had not yet come into being.

It is pleasing to note that the Michigan State Medical Society has kept pace and is keeping pace with these advances, and best of all to note the progressive growth of a social conscience and a social responsibility.

But what of the future? Is war to come and interrupt these advances? Is our progressive thinking to be disturbed or permanently dislocated by the catastrophic crises in Europe? There is a traditional solidity to the profession equalled only by the church, and I have faith that the progress of medicine will, in spite of interruptions, continue. Now, more than ever, doctors must feel their obligation to the profession, and put their shoulders to the wheel if medicine is to maintain its traditional form with its ethics intact.

As I write for the last time this page, I take occasion to express my appreciation and that of the Society to committee members and chairmen, who have contributed so generously to make this year a year of exceptional progress.

Burton P. Corbus

President, Michigan State Medical Society.

DETROIT WELCOMES YOU

PHYSICIANS and their families who return again this year to Detroit for the annual meeting of the Michigan State Medical Society, will find as hearty a welcome as ever awaiting them.

Detroit with genuine sincerity is extending the glad hand to its out-of-town guests; the Wayne County Medical Society, host organization, is looking forward to the pleasure of entertaining the physicians and members of their families this month.

To the women guests, Detroit's stores will be found as attractive as ever, and who of them does not enjoy an afternoon's shopping? Not only this as a diversion, the Art Center is within easy reach by automobile or bus.

The Public Library—Detroit

Detroit has become one of the important education centers of the country. Wayne University, perhaps the largest municipal educational institution of its kind, has grown great with its affiliated medical, law and teachers' colleges. And here the medical reader will be interested in the movement in the Wayne University Medical School which has succeeded the Detroit College of Medicine and Surgery. The older institution emphasized the practical or clinical features of medicine. The Wayne Medical School has undertaken extensive research in the various sciences basic to medicine and surgery. It is a class A school, meeting all the requirements of the Council on Medical Education of the American Medical Association. The buildings on St. Antoine and Mullett Streets, which house the school, will be familiar to the graduates of the old Detroit College of Medicine and Surgery, but many new faces of full time professors and instructors will be found. The trend towards research is in keeping with the spirit of the age in Detroit. The rich and varied clinical material which such a large city provides is being used for teaching purposes. Clinics by Wayne County members of the medical profession constitute

a postgraduate course throughout the entire year.

Detroit as a manufacturing and industrial center is well known to all. Not only is it the center of the largest automobile industry in the world, but it has the largest stove manufacturing plant, adding machine concern, pharmaceutical laboratory, and electric refrigeration plant. There are one hundred and thirty-three companies manufacturing drugs and chemicals. Detroit has a municipal airport as well as a county airport, and airplanes are manufactured by a number of concerns. It has the largest copper and brass rolling mills and is well forward in the production of salt, marine engines, paints and varnishes, freight cars, vacuum cleaners, and many other products.

Night Scene, Washington Boulevard, Detroit

The Wayne County Medical Society is the fourth largest component society in the United States. Its 1,800 members enjoy an unusually large number of benefits, among which the Society's home at the corner of Woodward and Canfield is notable. The facilities of these beautiful headquarters were made available to the members of the Society through the interest of the David Whitney family. In these surroundings, not only the scientific side of medicine but also the social aspects are enhanced. Daily luncheon is served; special dinners and many organizational functions that make for friendly coöperation among the members of the profession and their families are constant events. Outstate physicians are invited to visit the headquarters of the Wayne County Medical Society on the occasion of the 1940 Detroit Convention.

Of the attractions, Greenfield Village and the Detroit Zoological Gardens are among the most interesting objects in America. Greenfield Village at Dearborn is a historical museum of Americana becoming more important and valuable with the march of time. The Zoological Gardens out Woodward Avenue show the various animals in a native habitat as nearly as possible. The Gardens have an area of 125 acres served by a miniature narrow gage railway which relieves the spectator of much walking.

Scene in Greenfield Village

Come to Detroit and enjoy its attractions.

THE 75TH ANNUAL MEETING
DETROIT — 1940

CONVENTION INFORMATION

DIRECTORY

Headquarters.....**Book-Cadillac Hotel, Detroit**

Registration.....**Fifth Floor, Book-Cadillac Hotel**

Official M.S.M.S. Booth.....
Fifth Floor, Book-Cadillac Hotel

General Assemblies.....
Grand Ballroom (Fourth Floor), Book-Cadillac Hotel

Technical Exhibition .....
Fourth Floor, Book-Cadillac Hotel

Press Room .....
Parlor "F," Fifth Floor, Book-Cadillac Hotel

Woman's Auxiliary Headquarters.....
Book-Cadillac Hotel

* * *

Register—Fifth Floor, Book-Cadillac Hotel, Detroit—as soon as you arrive.

Admission will be by badge only to all Scientific Assemblies and Section Meetings. Monitors at entrance.

Bring your M.S.M.S. or A.M.A. Membership Card to expedite registration.

No registration fee to members of the Michigan State Medical Society.

Hours of Registration: Daily 8:30 a.m. to 6:00 p.m. on Tuesday, Wednesday, and Thursday, and to 4:00 p.m. on Friday.

* * *

Guests—Members of the American Medical Association from any state, or from a province of Canada and physicians of the Army, Navy and U. S. Public Health Service are invited to attend, as guests. Please present credentials at Registration Desk.

Bona-fide doctors of medicine serving as internes, residents, or who are associate or probationary members of county medical societies, *if vouched for by an M.S.M.S. Councilor or the president or secretary of the county medical society,* will be registered as guests. (Please present credentials at Registration Desk.)

* * *

Physicians, not members, if listed in the American Medical Directory, may register as guests upon payment of $5.00. This amount will be credited to them as dues in the Michigan State Medical Society **for the balance of 1940 only,** provided they subsequently are accepted as members by their County Medical Society.

* * *

The Committee Organization Luncheon, a meeting of M.S.M.S. Committee Chairmen who have been appointed by President-Elect Urmston to serve during the coming year, will be held on Wednesday, September 25, 1940, 12:30 p.m. in Parlor "H" of the Book-Cadillac Hotel.

Symposium on

"THE BUSINESS SIDE OF MEDICINE"

Tuesday, September 24, 1940
12:15 to 4:30 p. m.

English Room
Book-Cadillac Hotel

This meeting is arranged especially for the secretaries and office assistants of members of the Michigan State Medical Society. Physicians are urged to send their office secretaries to this meeting; the suggestions and ideas offered at this session will more than repay the doctor for sending his secretary to this meeting. There is no registration fee, only a charge made by the hotel for the luncheon.

MARJORIE EULER

J. D. LAUX

Presiding: ALLAN MCDONALD, M.D., Detroit, President, Wayne County Medical Society

Luncheon—English Room—12:15 p.m.
(Subscription)

1. Welcome
   PAUL R. URMSTON, M.D., Bay City, President-Elect, Michigan State Medical Society
2. "The Highlights of Twenty-five Years of Service"
   MRS. MARJORIE EULER, Topeka, Kansas
3. "Organizing the Medical Assistants Society of Muskegon County"
   MISS MAXINE ROBINSON, Muskegon
4. "How to Bill Michigan Medical Service"
   J. D. LAUX, Executive Director, Michigan Medical Service, Detroit
5. "WHAT EVERY WOMAN KNOWS"
   DWIGHT ANDERSON, LL.B., New York City, Director of the Public Relations Bureau, N.Y. State Medical Society
7. Round-table discussion
8. Preview of M.S.M.S. Technical Exhibit (4:30 to 5:15 p.m.)

The Michigan Association of Industrial Physicians and Surgeons will meet Tuesday, September 24, 1940, in connection with the M.S.M.S. Convention. An Operative Clinic and Round Table Discussion will be held at Harper Hospital from 9:00 a.m. to 4:00 p.m. Dinner at the Book-Cadillac Hotel 6:30 p.m. All members of the Michigan State Medical Society are cordially invited to attend this meeting.

* * *

The Michigan Branch of the American Academy of Pediatrics will hold a dinner at the Hotel Statler, Thursday, September 26, at 6:30 P.M. For further details write W. C. C. Cole, M.D., 1077 Fisher Building, Detroit.

* * *

Headquarters of the Michigan State Medical Society are adjacent to the Registration Desk on the Fifth Floor of the Book-Cadillac Hotel. A Councilor or Officer of the Michigan State Medical Society will be in attendance at all times. Members are invited and urged to stop at the Headquarters Booth and meet the M.S.M.S. officers.

* * *

Diamond Jubilee Banquet—On Wednesday evening, September 25, at 7:00 o'clock, the Diamond Jubilee Banquet honoring the President and living Past Presidents of the Michigan State Medical Society, will be held in the Grand Ballroom of the Book-Cadillac Hotel. The following living Past Presidents of the State Medical Society will be guests of honor:

Reuben Peterson, M.D., Duxbury, Massachusetts—1914; Andrew P. Biddle, M.D., Detroit—1916 and 1917; Arthur M. Hume, M.D., Owosso—1918; Charles H. Baker, M.D., Bay City—1919; Guy L. Connor, M.D., Detroit—1923; J. B. Jackson, M.D., Kalamazoo—1926; Herbert E. Randall, M.D., Flint—1927; Louis J. Hirschman, M.D., Detroit—1928; J. D. Brook, M.D., Grandville—1929; J. Milton Robb, M.D., Detroit—1932; George LeFevre, M.D., Muskegon—1933; Grover C. Penberthy, M.D., Detroit—1935; Henry E. Perry, M.D., Newberry—1936; Henry Cook, M.D., Flint—1937; Henry A. Luce, M.D., Detroit—1938.

All M.S.M.S. members, their ladies and guests are invited to attend the Diamond Jubilee Banquet and help celebrate the completion of 75 years of service in Michigan by organized Medicine.

The public is invited to hear the Presidents' Night program. Invite your patients and other friends.

* * *

Upper Peninsula Cocktail party for Upper Peninsula physicians (past, present and future) and their wives, will be held at the Book-Cadillac on Wednesday, September 25, 5:00 p.m. Councilors W. H. Huron and A. H. Miller will be hosts.

* * *

Seven General Assemblies, Wednesday, Thursday, afternoon, Friday, September 25-26-27.

* * *

All Section Meetings will be held on Thursday morning, September 26, 1940.

* * *

Parking—Do not park on the street. Use parking lots available nearby, or inside parking facilities through hotel service.

Special rates for parking for members attending the Detroit meeting of the M.S.M.S. have been arranged as follows:

Two units of the Detroit Garages, Inc., one at Cass and Lafayette, and the north unit at Clifford and Elizabeth, will provide rates as follows:

2 hours—25c	24 hours—$1.00
4 hours—35c	3 days —$2.00
10 hours—50c	4 days —$2.50
18 hours—75c	

* * *

In Case of Emergency, doctors will be paged from the meetings by announcement on the screen.

* * *

Telephone Service—Local and long-distance telephone will be available. Inquire at Registration Desk, Fifth Floor, Book-Cadillac Hotel.

COUNTY SECRETARIES' CONFERENCE

English Room **Book-Cadillac Hotel**

Wednesday, September 25, 1940

LUNCHEON—12:00 to 1:30 P.M.

HORACE WRAY PORTER, M.D., Jackson, Presiding

DWIGHT ANDERSON

1. "The War of Ideas"
   DWIGHT ANDERSON, LL.B., Director of the Bureau of Public Relations, State Medical Society of New York, and author of "What It Means to Be a Doctor."

2. "The Crippled-Afflicted Children Laws Administration"
   L. FERNALD FOSTER, M.D., Bay City, Secretary, Michigan State Medical Society

All Members of the State Society will be Welcome at This Conference

The Maternal Health Committee announces that its annual reunion luncheon will be held on Thursday, September 26, 12:30 p.m. in the English Room, Book-Cadillac Hotel. All members, past and present, of the State Society's and of county societies' Maternal Health Committee are cordially invited to attend this get-together luncheon which is sponsored by the W. K. Kellogg Foundation.

Samuel A. Cosgrove, M.D., Jersey City, New Jersey, will be guest speaker. He has a real message for physicians who are interested in the subject of maternal health.

* * *

Acknowledgment—The Michigan State Medical Society sincerely thanks the following friends for their sponsorship of lectures at the 1940 meeting.

Sponsor and Lecturer—Michigan Department of Health, *Paul A. Neal, M.D.,* Washington, D. C.; The Michigan Tuberculosis Association, *Henry C. Sweany, M.D.,* Chicago; W. K. Kellogg Foundation, *Samuel A. Cosgrove, M.D.,* Jersey City; The McGregor Health Foundation, *H. Flanders Dunbar, M.D.,* New York; and The Children's Fund of Michigan, *L. Emmett Holt, Jr., M.D.,* Baltimore.

* * *

Essayists Are Very Respectfully Requested not to change time of lecture with another speaker without the approval of the General Assembly. This request is made in order to avoid confusion and disappointment on the part of the audience.

* * *

Register at Each Booth—There is something new for you in the interesting and large exhibit. Stop and show your appreciation of the exhibitors' support in making the Convention possible.

PAPERS WILL BEGIN AND END ON TIME!

Believing there is nothing which makes a scientific meeting more attractive than by-the-clock promptness and regularity, all meetings will open exactly on time, all speakers will be required to begin their papers exactly on time, and to close exactly on time, in accordance with the schedule in the program. All who attend the meeting, therefore, are requested to assist in attaining this end by noting the schedule carefully and being in attendance accordingly. Any member who arrives five minutes late to hear any particular paper will miss exactly five minutes of that paper!

Invitational Golf—All medical golfers in Michigan are cordially invited to participate in the golf match at the beautiful Detroit Golf Club on Monday, September 23, 1940, 1:00 p.m. Get together a foursome and try for one of the prizes. A big dinner will be served at 7:00 p.m. after which the trophies will be distributed. Events for experts, dubs and beginners. The price, which includes greens fees, dinner and service, only $4.00. Come to the Detroit Golf Club, Monday, September 23, have a lot of fun, see old pals, make new friends—and win a prize!

* * *

The Detroit Committee on Arrangements—Allan McDonald, M.D., Chairman.

Reception Committee—C. E. Weaver, M.D., George O'Brien, M.D., John Carter, M.D., Wm. L. Sherman, M.D., D. C. Somers, M.D., Wm. Summers, M.D., Howard P. Doub, M.D., Wm. S. Reveno, M.D., C. L. Candler, M.D., A. E. Catherwood, M.D., G. L. Coan, M.D., Don A. Cohoe, M.D., Wm. Bromme, M.D., R. J. Elvidge, M.D., Harry Dibble, M.D., C. W. Behn, M.D., A. A. Norconk, M.D., L. T. Colvin, M.D., Duane Beam, M.D., C. E. Stellhorn, M.D., Harold Reynor, M.D., W. L. Brosius, M.D., J. J. Corbett, M.D., J. E. Caldwell, M.D., C. L. Tomsu, M.D., George Van Rhee, M.D., C. W. Balser, M.D., G. S. Bates, M.D., L. E. Bauer, M.D., Jos. W. Becker, M.D., C. K. Valade, M.D., C. F. Brunk, M.D.

Committee on Public Relations—L. W. Hull, M.D., Chairman; L. T. Colvin, M.D., Jay M. Burgess, M.D., J. K. Bell, M.D., Harold F. Sawyer, M.D., W. C. Hawken, M.D., Charles E. Lemmon, M.D.

MICHIGAN MEDICAL SERVICE

First Annual Meeting, Michigan Medical Service. The members of Michigan Medical Service will meet on Monday, September 23, 1940, at 8:00 p.m. in the English Room, Book-Cadillac Hotel, Detroit. Members of Michigan Medical Service are all the members of the Michigan State Medical Society's House of Delegates plus the Directors of Michigan Medical Service. The officers' reports and election of directors will be on the agenda of the first annual meeting.

Baseball—The Detroit Tigers play at Briggs Stadium in Detroit on Sunday, Tuesday and Wednesday, September 22, 24 and 25. On Sunday, the Tigers tangle with the Cleveland Indians. On Tuesday and Wednesday the Tigers will entertain the Chicago White Sox.

* * *

Technical Exhibits—82 booths—open Wednesday, Thursday and Friday at 8:30 a.m.; close on Wednesday and Thursday at 6:00 p.m.; on Friday, close at 3:00 p.m. immediately after the last intermission to view exhibits.

* * *

Press Committee—J. Duane Miller, M.D., Chairman; Gaylord S. Bates, M.D., B. W. McDougall, M.D.

A ONE HUNDRED TWENTY PAGE JOURNAL!

This, the Diamond Jubilee Number of THE JOURNAL of the Michigan State Medical Society, contains 120 pages. This increase of forty pages is due mainly to the courtesy and coöperation of those business friends of the medical profession who inserted special advertisements and congratulatory messages to the doctors in the September, 1940, issue.

When patronizing these friends, say you saw their advertisement in the MSMS JOURNAL.

"WHAT A PROGRAM!"

Members in all parts of the state are eloquent in their enthusiasm over the program—both scientific and social—arranged for the Diamond Jubilee of the Michigan State Medical Society.

Plan to attend this excellent postgraduate opportunity—three days of concentrated, valuable knowledge, stored up for *YOU*.

No registration fee to MSMS members.

THE COUNTRY'S BEST POSTGRADUATE PROGRAM

Wander afield from Michigan and you will soon appreciate the fact that the Postgraduate Courses sponsored by the Michigan State Medical Society, University of Michigan Medical School, Wayne University College of Medicine, and the State Health Department, are well in the van of modern postgraduate programs.

The semi-annual extramural course for practicing physicians will be given in October.

CENTERS	DATES
Ann Arbor	**October 10, 17, 24, 31**
Battle Creek-Kalamazoo, jointly	**October 8, 15, 22, 29**
Flint	**October 9, 16, 23, 30**
Grand Rapids	**October 10, 17, 24, 31**
Lansing-Jackson, jointly	**October 10, 17, 24, 31**
Manistee-Traverse City-Cadillac-Petoskey, jointly	**October 11, 18, 25, November 1**
Mount Clemens	**October 9, 16, 23, 30**
Saginaw	**October 7, 14, 21, 28**

The subjects for the course are outlined on page 705; they have been carefully selected for their interest to the practicing physicians and on the basis of a four-year teaching program (ending in certification).

No fee is charged to legally-qualified doctors of medicine who are invited to attend regularly.

PROGRAM SYNOPSIS

MONDAY, SEPTEMBER 23, 1940

1:00 P.M. **M.S.M.S. Invitational Golf**
Detroit Golf Club, Detroit

4:00 P.M. **Meeting of The Council, M.S.M.S.**
Book-Cadillac Hotel, Detroit

6:00 P.M. **Golfers' Banquet and Presentation of Prizes**
Detroit Golf Club, Detroit

8:00 P.M. **First Annual Meeting of Members of Michigan Medical Service**
English Room, Book-Cadillac Hotel, Detroit

TUESDAY, SEPTEMBER 24, 1940

8:00 A.M. **Delegates' Breakfast**
English Room, Book-Cadillac Hotel

9:00 A.M. **First Session, House of Delegates**
Grand Ballroom, Book-Cadillac Hotel

9:30 A.M. to 4:00 P.M. **Industrial Physicians and Surgeons**
Harper Hospital, Detroit

12:15 P.M. **Symposium on "Business Side of Medicine"**
English Room, Book-Cadillac Hotel

3:00 P.M. **Second Session, House of Delegates**
Grand Ballroom, Book-Cadillac Hotel

5:15 P.M. **Preview of Technical Exhibit for members of House of Delegates and M.S.M.S. Officers**
Fourth Floor, Book-Cadillac Hotel

6:30 P.M. **Dinner, Industrial Physicians and Surgeons**
Book-Cadillac Hotel

8:00 P.M. **Third Session, House of Delegates**
Grand Ballroom, Book-Cadillac Hotel

WEDNESDAY, SEPTEMBER 25, 1940

8:30 A.M. **Registration:**
Fifth Floor, Book-Cadillac Hotel

Exhibits Open:
Fourth Floor, Book-Cadillac Hotel

9:30 A.M. **First General Assembly**
Grand Ballroom, Book-Cadillac Hotel
(for detailed program, see page 681)

12:00 Noon **County Secretaries' Conference (Luncheon)**
English Room, Book-Cadillac Hotel

12:30 P.M. **Committee Organization Luncheon**
Parlor H, Book-Cadillac Hotel

1:30 P.M. **Second General Assembly**
Grand Ballroom, Book-Cadillac Hotel
(for detailed program, see page 682)

7:00 P.M. **Diamond Jubilee Banquet, Honoring the President and Past-Presidents of the Michigan State Medical Society**
Grand Ballroom, Book-Cadillac Hotel

8:30 P.M. **Third General Assembly (Public Meeting)**
Grand Ballroom, Book-Cadillac Hotel
(for detailed program, see page 683)

THURSDAY, SEPTEMBER 26, 1940

8:30 A.M. **Registration:**
Fifth Floor, Book-Cadillac Hotel

Exhibits Open:
Fourth Floor, Book-Cadillac Hotel

9:30 A.M. **Meetings of Sections:**

(a) Section on General Medicine
English Room, Book-Cadillac Hotel
(see page 684)

(b) Section on Surgery
Grand Ballroom, Book-Cadillac Hotel
(see page 684)

(c) Section on Obstetrics and Gnyecology
Book Casino, Book-Cadillac Hotel
(see page 685)

(d) Section on Ophthalmology and Otolaryngology
Ophthalmology: Founders Room, Book-Cadillac Hotel
(see page 685)
Otolaryngology: Parlors G-H-I, Book-Cadillac Hotel
(see page 685)

(e) Section on Pediatrics
Washington Room, Book-Cadillac Hotel
(see page 686)

(f) Section on Dermatology and Syphilology
Harper Hospital, Detroit
(see page 686)

(g) Section on Radiology, Pathology and Anesthesia
Suite 1406-07, Book-Cadillac Hotel
(see page 686)

1:30 P.M. **Fourth General Assembly**
Grand Ballroom, Book-Cadillac Hotel
(for detailed program, see page 687)

9:00 P.M. **Fifth General Assembly**
Smoker (for members only)
(for detailed program, see page 688)

FRIDAY, SEPTEMBER 27, 1940

8:30 A.M. **Registration:**
Fifth Floor, Book-Cadillac Hotel
Exhibits Open:
Fourth Floor, Book-Cadillac Hotel

9:30 A.M. **Sixth General Assembly**
Grand Ballroom, Book-Cadillac Hotel
(for detailed program, see page 688)

12:30 P.M. **Maternal Health Luncheon**
English Room, Book-Cadillac Hotel

1:30 P.M. **Seventh General Assembly**
Grand Ballroom, Book-Cadillac Hotel
(for detailed program, see page 690)

4:30 P.M. **End of Convention**

DOCTOR: WILL YOU PLEASE VIEW THE ATTRACTIVE EXHIBITS CAREFULLY AND FREQUENTLY? (THE BOOTH RENTALS, YOU KNOW, DEFRAY CONVENTION COSTS)

WOMAN'S AUXILIARY

Mrs. L. G. Christian,
President

DETROIT CONVENTION COMMITTEE

Mrs. Harold F. Sawyer, Chairman
Mrs. T. Grover Amos, Co-Chairman
Mrs. Milton A. Darling, Banquet
Mrs. H. Walter Reed, Finance
Mrs. George Lanning, Flowers
Mrs. Audrey O. Brown, Hospitality
Mrs. Wm. L. Sherman, Luncheon
Mrs. E. C. Baumgarten, Printing
Mrs. S. Willard Wallace, Publicity
Mrs. Ledru O. Geib, Registration
Mrs. George Sewell, Transportation

Mrs. H. F. Sawyer
Convention Chairman

OFFICERS, 1939-40

Mrs. L. G. Christian, Lansing.....President
Mrs. Roger V. Walker, Detroit....President-Elect
Mrs. W. W. Bond, Monroe.....Vice President
Mrs. H. L. French, Lansing.....Secretary
Mrs. W. J. Butler, Grand Rapids.....Treasurer
Mrs. P. R. Urmston, Bay City.....Past President
Mrs. Guy L. Kiefer, East Lansing
Honorary President

PROGRAM

Monday, September 23, 1940

Registration—Book-Cadillac Hotel

Tuesday, September 24, 1940

10:00 A.M. **Registration—Book-Cadillac Hotel**

1:00 P.M. **Luncheon, Pre-convention Board Meeting—Founders Room, Book-Cadillac Hotel, 1939-40 Board Members and County Presidents**

7:00 P.M. **Banquet—English Room, Book-Cadillac Hotel**

Presiding—Mrs. L. G. Christian, Lansing, President, Woman's Auxiliary to M.S.M.S.

Chairman—Mrs. Harold F. Sawyer, Pleasant Ridge

Introduction of Past Presidents

Address—Mrs. V. E. Holcombe, Charleston, W. Va., National President, Woman's Auxiliary to A.M.A.

Bridge

Wednesday, September 25, 1940

9:00 A.M. **Formal Opening of Convention—Founders Room, Book-Cadillac Hotel**

Presiding—Mrs. L. G. Christian

Address of Welcome—Mrs. Frederick G. Buesser, Detroit

Response—Mrs. W. W. Bond, Monroe

In Memoriam—Mrs. J. H. Dempster, Detroit

Reading of Minutes—Mrs. H. L. French, Lansing

Report of Treasurer—Mrs. W. J. Butler, Grand Rapids

Auditor's Report—Mrs. W. J. Butler

Report, Convention Chairman — Mrs. Harold F. Sawyer, Pleasant Ridge

Credentials and Registration — Mrs. Ledru O. Geib, Detroit

Report of Special Committee and President's Message—Mrs. L. G. Christian

Reports of Standing Committees

Reports of County Presidents

Reports of Committee on Nominations

Election and Installation of Officers

Presentation of Pin

Courtesy Resolutions

Adjournment

1:00 P.M. **Luncheon at Detroit Boat Club**

Presiding—Mrs. Harold F. Sawyer

Address—"Our Opportunities"—Howard H. Cummings, M.D., Ann Arbor, Member, Executive Committee of The Council, M.S.M.S.

4:00 P.M. **Post-Convention Board Meeting**

Presiding—Mrs. Roger V. Walker, Detroit

1940-1941 Board Members

7:00 P.M. **Diamond Jubilee Banquet of the Michigan State Medical Society**

For M.S.M.S. members, their wives and guests, Grand Ballroom, Book-Cadillac Hotel

PROGRAM of GENERAL ASSEMBLIES

WEDNESDAY MORNING
September 25, 1940

First General Assembly

Grand Ballroom, Book-Cadillac Hotel

ROY C. PERKINS, M.D., Presiding

L. FERNALD FOSTER, M.D., and T. I. BAUER, M.D., Secretaries

A. M.

9:30 "Surgery of the Heart and The Heart in Surgery"

WALLACE M. YATER, M.D., Washington, D. C.

W. M. YATER

M.D., Georgetown University, 1921. After two years' internship he engaged in general practice in Washington, D. C., for four years, then spent several years as a Fellow in Medicine of the Mayo Foundation, Rochester, Minnesota. He returned to Washington, D. C., as Associate Professor of Medicine of Georgetown University School of Medicine. In 1931 he became Professor and Head of the Department of Medicine of the same school, a position which he has occupied ever since. He is also physician-in-chief at Georgetown University Hospital and at Gallinger Municipal Hospital. He is co-author of "Symptom Diagnosis" and author of "The Fundamentals of Internal Medicine." He has published more than 120 scientific articles.

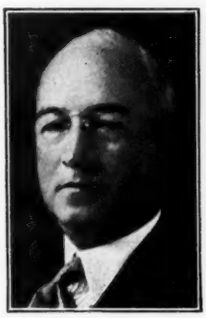
Surgical procedures may have important effects upon the heart, either by operations upon different parts of the body or by operations upon the heart itself. Of the former, the most important is the cure of heart failure due to exophthalmic goiter or toxic adenoma of the thyroid gland by means of sub-total thyroidectomy. A less common procedure is the removal of an arteriovenous fistula, usually traumatic in origin, with relief of cardiac strain produced by the fistula. Although essential hypertension is not a disease of the heart, nevertheless the heart is often strained to the point of failure by its presence; certain operations are being performed with partial success in the relief of essential hypertension.

Of the operations on the heart itself those for traumatic lesions will not be discussed. Purulent pericarditis usually requires surgical drainage, but the mortality is still high. Pericardiectomy even when incomplete sometimes produces remarkable results in cases of chronic constrictive pericarditis. The hardest cases to work with are usually those associated with extensive calcification of the pericardium. Operations performed for the purpose of improving the myocardial blood supply are the pectoral muscle-graft operation of Beck and the omental graft operation of O'Shaughnessy. The practicability and efficacy of these operations are still to be determined. A few operations have been performed to ligate the patent ductus arteriosus. Removal of emboli from the large pulmonary arterial trunks has been successful in some cases.

Major operations may be performed on patients with heart disease provided there is no congestive heart failure present and a skillful anesthetist is available. Many cardiac patients go through operations successfully. Except in cases of urgent emergency all evidence of congestion should be removed if possible before operation.

10:00 "Medical and Surgical Aspects of Diseases of the Prostate"

HUGH HAMPTON YOUNG, M.D., Baltimore, Md.



H. H. YOUNG

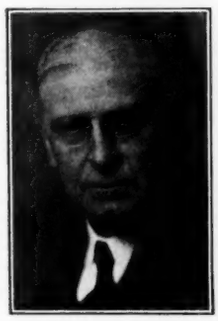
M.D., University of Virginia Medical School. He is professor of urology at the Johns Hopkins University Medical School, and visiting urologist to the Johns Hopkins Hospital. Director of Brady Urological Institute, Johns Hopkins Hospital. Author of over three hundred papers, and has written the following books: "Hypertrophy and Cancer of the Prostate"; "Practice of Urology"; a three-volume textbook, with David M. Davis; "Urological Roentgenology," with Charles A. Waters; and "Genital Abnormalities, Hermaphroditism and Related Adrenal Diseases." Member of the American Urological Association, American Association of Genito-Urinary Surgeons and the International Society of Urology. Served as president of each of these organizations. He also belongs to many other medical societies in this country and abroad. Fellow of the Royal College of Surgeons of Ireland. During the World War, Dr. Young was Director of the Division of Urology, A.E.F. and received the D.S.M.

Interest and knowledge of prostatic examinations should be possessed by general practitioners who are usually the first consulted. A simple rectal palpation of the prostate and vesicles may detect diseases which can be quickly cured: prostatitis, prostatic calculi, benign hypertrophy, carcinoma often sufficiently early for radical cure, tuberculosis, sarcoma, cysts, and other rarer conditions. Carcinoma occurs in more than 14 per cent of males over 45 years of age and may often be recognized by simple rectal examination. By radical operation a large percentage of these early cases have been cured. By simple perineal exposure a positive diagnosis can be made and in very early cases hemiprostatectomy is sufficient to obtain a cure. If the disease proves benign, simple enucleation of the hypertrophied lobes and neat surgical closure of the prostatic wound is the quickest, most satisfactory, and in expert hands the safest operation for the larger prostatic hypertrophies. For small obstructions at the vesical orifice, the punch operation, or some of its modifications, is quite satisfactory. Only by complete mastery of both prostatectomy and transurethral resection can the patient be given scientific operative treatment in all diseases of the prostate.

10:30 INTERMISSION TO VIEW THE EXHIBITS

11:00 "Arterial Hypertension, Forty Years in in Retrospect"

ARTHUR R. ELLIOTT, M.D., Chicago, Illinois



A. R. ELLIOTT

M.D., Queen's University, Canada, 1892; LL.D., Queen's University, 1926. Clinical Professor of Medicine, Rush Medical College, University of Chicago. Senior Attending Physician and Head of Medical Division of St. Luke's Hospital, Chicago.

Beginning with clinical experience in arterial hypertension before the days of the clinical sphygmomanometer, an attempt will be made to pass in review the development of our present clinical concept of that condition. Appraisal of progress made and critique of both medical and surgical therapy to "bring down the blood pressure."

11:30 "Self-Inflicted Injuries"

J. DERYL HART, M.D., Durham, North Carolina

J. D. HART

Professor of Surgery, Duke University, School of Medicine; in Charge of Surgical Department, Duke Hospital, Durham, North Carolina. Author of numerous medical publications.

Self-inflicted injuries are more frequent than is commonly suspected. In the presence of unexplained lesions or wounds which, for no apparent reason, fail to heal, one should keep in mind the possibility of self-mutilation. The two most important considerations in making a diagnosis are: 1. Suspect the possibility of self-injury; 2. Obtain prompt healing after removing the wound from all chance of trauma.

A series of cases are reported, a few of which illustrate such injuries occasionally seen by us in the mentally defective, or in those in a position to receive financial gain. The majority, however, have stood to receive no reward other than sympathy, or the pleasure of confounding their family, friends and physicians.

Admission by the patient that the injury is self-inflicted is rare. Such an accusation should never be made without unquestionable proof, and even then it may be preferable without definite statements to make the patient understand that the nature of his trouble is evident to the physician. In the case of certain individuals this knowledge kept in confidence can be used to restrain them from a continuation of self-mutilation though others will persist in their self-mutilation in spite of every treatment, argument, or threat that may be used.

WEDNESDAY NOON
September 25, 1940

Luncheon Meeting, English Room, Book-Cadillac Hotel—12:00 Noon to 1:15 p. m.

P. M.

12:45 "The War of Ideas"

DWIGHT ANDERSON, LL.B., New York, N. Y.

DWIGHT ANDERSON

LL.B., Western Reserve University. Has been director of the Public Relations Bureau, Medical Society of the State of New York, since the establishment of the Bureau in 1935. During the ten years prior to his present connection he was publicity consultant for the National Tuberculosis Association, the Maternity Center Association, and other organizations engaged in voluntary health work. At various times he has acted in a consulting or executive capacity for the American College of Surgeons, the American College of Physicians, the American Public Health Association, and the American Association of Orthodontists. He is author of the very fine book, "What It Means to Be a Doctor" which was published recently.

THIS IS THE COUNTY SECRETARIES' CONFERENCE TO WHICH ALL M.S.M.S. MEMBERS ARE MOST CORDIALLY INVITED

WEDNESDAY AFTERNOON
September 25, 1940
Second General Assembly

Grand Ballroom, Book-Cadillac Hotel

E. F. SLADEK, M.D., Presiding

L. FERNALD FOSTER, M.D., and R. G. LAIRD, M.D., Secretaries

P. M.

1:30 "Modern Trend in the Treatment of Syphilis"

PAUL A. O'LEARY, M.D., Rochester, Minn.

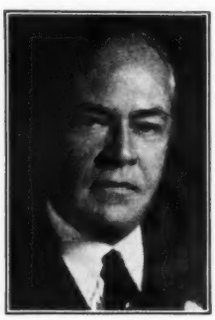
P. A. O'LEARY

Professor of Dermatology and Syphilology, Graduate School, University of Minnesota. Director, Department of Dermatology and Syphilology, The Mayo Clinic, Rochester, Minnesota.

The results of the treatment of early syphilis have been so far from ideal that new systems of treatment that are technically simpler, less expensive and less time consuming, have been sought. The so-called five-day plan has some of these features which to date, however, have been offset by serious complications and the need for hospitalization. The period of infectiousness of syphilis as estimated by a survey of a large group of husbands and wives offers a convincing argument of the need for further improvement in the therapy of the disease. Oral bismuth is still in the early experimental phases. A survey of the comparative value of the different types of fever therapy, i.e., malaria versus machine therapy, shows a striking parallelism in certain aspects and differences in others. The indications for fever therapy are well defined.

2:00 "Vitamin and Mineral Requirements in Pregnancy and the Puerperium"

JOHN H. MUSSER, M.D., New Orleans, La.



J. H. MUSSER

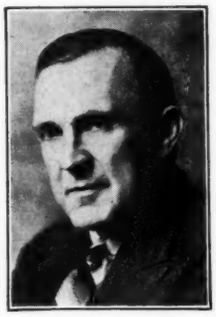
University of Pennsylvania, B.S. 1905, M.D. 1908. Practiced internal medicine until the War, when he spent two years in the Army. After returning to Philadelphia he became Associate in Medicine at the University of Pennsylvania and on the staff of three of the local hospitals. In 1925 he came to Tulane as Professor of Medicine, where he has been ever since. He also is Senior Visiting Physician at the Charity Hospital, New Orleans. Has at various times been president of the American College of Physicians, and vice president of the American Medical Association. At present is on the American Board of Internal Medicine, and the Council on Medical Education and Hospitals of the A.M.A.

The minor expressions of vitamin deficiency are extremely common in pregnant women. During the puerperium vitamin deficiency may frequently be observed but more common is seen the result of mineral want. Vitamin requrements in pregnancy are greater than normal due to increase in total metabolism or to food idiosyncrasy. During the puerperium the explanation may be attributed to increased excretion from lactation. A discussion of the several vitamins and the more important minerals, which are affected by pregnancy and lactation, will be presented, with accentuation on the minor evidences of any one or combinations of these two substances which may produce poor health.

2:30 INTERMISSION TO VIEW THE EXHIBITS

3:00 "Methods of Resuscitation"

RALPH M. WATERS, M.D., Madison, Wisconsin



R. M. WATERS

Professor of Anesthesia, Medical School, University of Wisconsin. Director, Department of Anesthesiology, Wisconsin General Hospital.

Older methods of reëstablishing respiratory function will be reviewed. The principles involved in treatment of persons in extremis from acute respiratory depression will be discussed.

The elaborate mechanical devices sometimes used for resuscitation will be contrasted with more simple and available methods. The duties of physicians in the treatment of persons found suffering from acute respiratory depression or arrest will be emphasized. It will be suggested that the custom of relegating such treatment to others than physicians may, in part, result from our own ignorance in the matter.

3:30 "Cyanosis of The New Born"

CHARLES F. MCKHANN, M.D., Boston, Mass.

C. F. MCKHANN

S.B., A.M., M.D., University of Wisconsin. Formerly Associate Professor of Pediatrics and Communicable Diseases, Harvard University Medical School and School of Public Health; Visiting Physician, Infants' and Children's Hospitals, Boston: Consulting Physician, Haynes Memorial Hospital for Contagious Diseases, Boston; and Cape Cod Hospital, Hyannis, Mass.; Visiting Professor of Pediatrics, Peiping Union Medical College, Peiping, China, 1935-36. Newly-appointed Professor of Pediatrics and Communicable Diseases, and Chairman of the Department of Pediatrics and Communicable Diseases, University of Michigan, 1940. Member: American Medical Association, American Academy of Pediatrics, American Pediatric Society, American Society for Clinical Investigation, Society for Pediatric Research (President, 1936), New England Pediatric Society, Massachusetts Medical Society, American Public Health Association, American Board of Pediatrics.

Cyanosis in the newly born may be caused by peripheral circulatory collapse, congenital cardiac defects, atelectasis, edema or hemorrhage into the lungs, but the most common cause is central respiratory depression due to cerebral injury from intrauterine asphyxia or from birth trauma.

Petechial hemorrhages into the brain tissue in asphyxiated babies seem to accompany rather than to cause the nerve cell damage. Birth trauma usually results in gross bleeding from ruptured vessels. Treatment influences favorably cases with gross trauma but with asphyxia prevention rather than treatment is necessary.

BRING YOUR M.S.M.S. MEMBERSHIP CARD TO FACILITATE REGISTRATION.

4:00 "Planned Parenthood: Its Contribution to National Preparedness"

RICHARD N. PIERSON, M.D., New York, N. Y.

R. N. PIERSON

A.B., Princeton University; M.D., College of Physicians and Surgeons, Columbia University, 1918; Formerly Attending Gynecologist and Obstetrician, The Sloane Hospital for Women, New York. Fellow, American College of Surgeons, New York Obstetric Society. Consulting Gynecologist and Obstetrician Stamford Hospital, Stamford, Conn., and Huntington Hospital, Huntington, L. I.

The American people have been shown by Gallup polls and other studies to be overwhelmingly in favor of the principle of planned parenthood. Most patriotic Americans have deplored a falling birth rate here in the U. S. Preliminary studies of the 1940 census suggest a slowing down or reversal of this trend. Response of Americans toward war refugee children show our determination to provide a civilization to accommodate more healthy, wanted children. It is the responsibility of the doctors to help and encourage the fit to have larger families.

The U. S. Army experience in the Great War showed relatively high percentage of draft physically unfit for military service. Public health officers and the profession generally agree that birth control prescribed for medical reasons will lower maternal mortality and morbidity, improve the quality and health of our children. Better medical and social services throughout childhood will maintain this gain.

Planned parenthood on both the positive and negative side, guided and administered by doctors, will contribute importantly to our National Preparedness.

4:30 End of Second General Assembly

THE EIGHTY-TWO (82) EXHIBITS WILL REMAIN OPEN FOR YOUR INSPECTION UNTIL 6:00 P. M.

WEDNESDAY EVENING

September 25, 1940

Third General Assembly
Public Meeting

Diamond Jubilee Dinner

Grand Ballroom, Book-Cadillac Hotel

BURTON R. CORBUS, M.D., Presiding

L. FERNALD FOSTER, M.D., Secretary

PRESIDENTS' NIGHT

P. M.

7:00 The BANQUET, Honoring the President and Past Presidents of the Michigan State Medical Society
Music by the Wayne County Medical Society String Quintet

8:30

1. **Call to order by President Burton R. Corbus, M.D., and presentation of Past Presidents.**
   Response
2. **Announcements and Reports of the House of Delegates by Secretary L. Fernald Foster, M.D., Bay City.**

3. **President's Annual Address—Burton R. Corbus, M.D., Grand Rapids**

4. **Presentation of Scroll and Past President's Key to Doctor Corbus by Henry R. Carstens, M.D., Detroit, Chairman of The Council**

5. **Induction of Paul R. Urmston, M.D., Bay City, into office as President of the Michigan State Medical Society**
   Response

6. **Introduction of the President-Elect, and other newly elected officers of the State Society**

9:00 7. **"Role of Medical Societies in Medical Progress"**

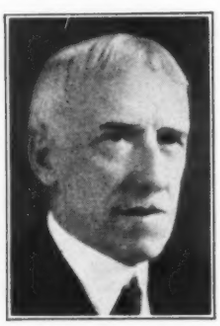
RUFUS I. COLE, M.D., Mt. Kisco, New York

R. I. COLE

B.S., University of Michigan; M.D., Johns Hopkins University, 1899; Sc.D., University of Chicago. Member of the Staff of the Johns Hopkins Medical School and Hospital from 1899 to 1908. Member and Director of the Hospital of the Rockefeller Institute for Medical Research from 1908 to 1937. During this period engaged in research on problems relating to internal medicine, especially infectious diseases. At present, Member Emeritus, Rockefeller Institute; Vice President, New York Academy of Medicine; Member, National Academy of Sciences.

Relation of medical societies to the early scientific societies. Purposes of medical societies as stated by their founders. History of the development of medical societies in this and other countries; relation to academies. Influence of medical societies on scientific advancement, on education and on public health. Their effect on the scientific and cultural development of the individual members and other members of the profession. The importance of collective action through societies on the economic and social status of the physician.

8. **Presentation of Biddle Oration Scroll to Doctor Cole**



A. P. BIDDLE, M.D., Detroit
Patron of Postgraduate Medical Education

10:00 End of Third General Assembly

VIEW THE EXTRAORDINARY EXHIBIT OF 82 SPACES

— PROGRAM of SECTIONS —

THURSDAY MORNING

September 26, 1940

SECTION ON GENERAL MEDICINE

Chairman—PAUL W. KNISKERN, M.D., Grand Rapids
Secretary: T. I. BAUER, M.D., Lansing

English Room, Book-Cadillac Hotel

A. M.

9:00 **"Blood Transfusions and Blood Banks"**
S. M. GOLDHAMER, M.D., Ann Arbor

9:30 **"Clinical Use of Sulfathiozole"**
GORDON MYERS, M.D., Detroit

10:00 **"Remarks on Coronary Vascular Heart Disease"**
JOHN H. MUSSER, M.D., New Orleans, La.

10:30 **"Medical Management of Chronic Ulcerative Colitis"**
THOMAS MACKIE, M.D., New York City

11:00 **"Clinical Pathological Conference, Conducted by**
OSBORNE BRINES, M.D., and PAUL NOTH, M. D., Detroit
DISCUSSANTS: EDWARD SPALDING, M.D., Detroit
CYRUS C. STURGIS, M.D., Ann Arbor

11:45 **Election of Officers**

SECTION ON SURGERY

Chairman: IRA G. DOWNER, M.D., Detroit
Secretary: O. H. GILLETT, M.D., Grand Rapids

Grand Ballroom, Book-Cadillac Hotel

SYMPOSIUM ON PRE-OPERATIVE AND POST-OPERATIVE TREATMENT IN SURGERY

A. M.

9:00 **"Post-operative Pulmonary Complications"**
CAMERON HAIGHT, M.D., Ann Arbor

9:30 **"Nutrition in Surgery"**
CHARLES S. KENNEDY, M.D., Detroit

10:00 **"Pre-operative Preparation of the Patient"**
AMBROSE L. LOCKWOOD, M.D., Toronto, Canada

10:30 **"Surgical and Operating Room Technique"**
J. DERYL HART, M.D., Durham, North Carolina

11:00 **"Pre-operative Treatment and Post-operative Complications of Urological Surgery"**
HUGH H. YOUNG, M.D., Baltimore, Maryland

11:30 "Vascular Post-operative Complications of General Surgery"

ALTON OCHSNER, M.D., New Orleans, Louisiana

12:00 Election of Officers

SECTION ON OBSTETRICS AND GYNECOLOGY

Chairman: HARRY A. PEARSE, M.D., Detroit
Secretary: CLAIR E. FOLSOME, M.D., Ann Arbor

Book Casino, Book-Cadillac Hotel

A. M.

9:30 to 9:50 "Pregnancy Complicated by Uterine Fibroids"

ROBERT WILLSON, M.D., Ann Arbor

9:50 to 10:10 "Postpartum Sterilization"

WILLIAM BIRCH, M.D., Sault Ste. Marie

10:10 to 10:30 "Benign Tumors of the Ovary"

HOWARD C. WALSER, M.D., Detroit

10:30 to 11:00 "The Three Newest Hormones in Gynecology"

JACOB P. GREENHILL, M.D., Chicago

11:00 to 11:30 "Clinical Experiences in Premarital Consultation in Private Practice"

RICHARD N. PIERSON, M.D., New York City

11:30 Election of Officers
Luncheon

SECTION ON OPHTHALMOLOGY AND OTOLARYNGOLOGY

Chairman: O. B. MCGILLICUDDY, M.D., Lansing
Secretary: ROBERT G. LAIRD, M.D., Grand Rapids

OPHTHALMOLOGY

Founders Room, Book-Cadillac Hotel

A. M.

9:30 "The Use of Suction in Cataract Surgery"

E. L. COOPER, M.D., Detroit

10:00 "Sympathetic Ophthalmia"

DON MARSHALL, M.D., Kalamazoo

10:30 "The Diagnosis and Treatment of Inclusion Conjunctivitis in the New Born"

A. E. BRALEY, M.D., Detroit

11:00 "Nummular Keratitis, Report of a Case"

WM. S. CONWAY, M.D., Petoskey

11:30 "Retinal Changes Associated with Arterial Hypertension"

WALTER IVAN LILLIE, M.D., Philadelphia

OTOLARYNGOLOGY

Parlor G-H-I, Book-Cadillac Hotel

A. M.

9:30 "Indications for Simple and Radical Mastoidectomy"

HANS BRUNNER, M.D., Chicago

H. BRUNNER

Docent at the University of Vienna; formerly Chief of the Otolaryngological Department at the Allgemeine Poliklinik in Vienna; formerly President of the Austrian Otological Society; Associate Professor of Otolaryngology, University of Illinois, College of Medicine; Honorary member of the American Academy of Ophthalmology and Otolaryngology; Member of the Collegium Otolaryngologicum.

The simple mastoidectomy is indicated (a) if there is a completely developed acute or subacute mastoiditis, (b) if there are signs of an intracranial complication even in the absence of a completely developed mastoiditis. The symptoms of the acute or subacute mastoiditis which is also called "Coalescent mastoiditis," and the symptoms of a beginning complication in an incompletely or hemorrhagic mastoiditis are discussed.

The radical operation has a relative and an absolute indication. The relative indication is found in a chronic otitis affecting the bony walls of the middle ear and treated for a certain period of time without success. The absolute indication is found (a) when there are symptoms of the suppuration having passed the surgical margins of the middle ear, and (b) when symptoms of an intracranial complication are present.

11:00 "Diagnosis and Treatment of Esophageal Lesions"

WADSWORTH WARREN, M.D., Detroit

11:30 "Carcinoma of the Larynx"

ARTHUR HAMMOND, M.D., Detroit

12:00 noon "Physiology of the Nose"

DEWEY R. HEETDERKS, M.D., Grand Rapids

P. M.

12:30 Election of Officers of Section on Ophthalmology and Otolaryngology
Luncheon

SECTION ON PEDIATRICS

Chairman: Ed. A. Wishropp, M.D., Detroit
Secretary: Harry A. Towsley, M.D., Ann Arbor

Washington Room, Book-Cadillac Hotel

A. M.

9:30 **"A Kodachrome Demonstration of Some Allergic Dermatosis"**
Samuel Levin, M.D., Detroit

10:00 **"Nutritional and Metabolic Problems in the Adolescent Girl"**
Joseph Johnston, M.D., Detroit

10:30 **"Sulphathiazol Series"**
Benjamin Carey, M.D., Detroit

11:00 **"Prevention of Spread of Air-borne Infections"**
Charles F. McKhann, M.D., Boston

12:00 **Business Meeting—Election of Officers**

SECTION ON DERMATOLOGY AND SYPHILOLOGY

Chairman: Frank R. Menagh, M.D., Detroit
Secretary: Eugene A. Hand, M.D., Saginaw

Harper Hospital, Detroit

A. M.

9:30 to 11:00 **Clinic at Harper Hospital**

11:00 to 12:00 **Discussion of Cases**

12:30 **Election of Officers—Luncheon, Harper Hospital Cafeteria**

SECTION ON RADIOLOGY, PATHOLOGY AND ANESTHESIA

Chairman: C. K. Hasley, M.D. (Rad.), Detroit
Secretary: A. V. Wenger, M.D. (Anes), Grand Rapids
F. W. Hartman, M.D. (Path.), Detroit

Room 1406-7, Book-Cadillac Hotel

"SYMPOSIUM ON ANOXIA"

A. M.

9:00 **Chairman's Address**
Clyde K. Hasley, M.D., Detroit

9:15 **"Anoxia from the Anesthetist's Point of View"**
Ralph M. Waters, M.D., Madison, Wisconsin

9:45 **"A Study of Alpha-Lobeline, Metrazol and Coramine in Experimental Anoxia"**

Nicholson J. Eastman, M.D., Baltimore, Maryland

N. J. Eastman

A.B., Yale University, 1916; M.D., Indiana University School of Medicine, 1921. Instructor and Associate in Obstetrics, Johns Hopkins University, 1928-1933; Professor of Obstetrics and Gynecology, Peiping Union Medical College, 1933-35; Professor of Obstetrics, and Obstetrician-in-Chief, Johns Hopkins University and Hospital, respectively, since 1935. Member of American Gynecological Society; American Association of Obstetricians, Gynecologists, and Abdominal Surgeons; American Medical Association; Society of Experimental Biology and Medicine Sigma Xi.

Experimental asphyxia in dogs produced by the administration of 100 per cent helium reduplicates in its entirety the clinical syndrome of asphyxia neonatorum, that is, apnea, bradycardia, falling blood pressure, muscular flaccidity and blood oxygen levels between 2 and 4 volumes per cent. In the presence of such experimental asphyxia, alpha-lobeline, metrazol and coramine, drugs widely recommended for the treatment of asphyxia neonatorum, do not initiate respiration; on the other hand, insufflation with 100 per cent oxygen leads to restitution of spontaneous respiration within a few seconds. The reasons for the failure of these drugs in profound asphyxia are discussed.

10:30 **"Anoxia from the Pediatrician's Point of View"**
W. C. C. Cole, M.D., Detroit

10:50 **"Anoxia from the Neuro-Surgeon's Point of View"**
Frederic Schreiber, M.D., Detroit

11:10 **"Anoxia from the Pathologist's Point of View"**
Frank W. Hartman, M.D., Detroit

11:30 **Discussion, to be opened by**
A. V. Wenger, M.D., Grand Rapids
M. A. Darling, M.D., Detroit
Frank Murphy, M.D., Detroit

12:00 **Election of Officers**

DOCTOR: WILL YOU REGISTER AT EACH BOOTH AND SHOW YOUR APPRECIATION OF THE EXHIBITORS' FINE CO-OPERATION AND COSTLY OUTLAY?

PROGRAM of GENERAL ASSEMBLIES

THURSDAY AFTERNOON
September 26, 1940

Fourth General Assembly

Grand Ballroom, Book-Cadillac Hotel

O. O. BECK, M.D., Presiding

L. FERNALD FOSTER, M.D., and ED. A. WISHROPP, M.D., Secretaries

P. M.

1:30 "Fundal Changes Associated with General Diseases"

WALTER IVAN LILLIE, M.D., Philadelphia, Pa.

W. I. LILLIE

Professor and Head of Department of Ophthalmology, Temple University School of Medicine; Chief Ophthalmologist, Temple University Hospital, Philadelphia; Consulting Ophthalmologist: Shriners Hospital for Crippled Children, Philadelphia, Norristown State Hospital, Norristown, Pa., Eagleville Sanatorium, Eagleville, Pa. Member: American Medical Association, American Ophthalmological Society, American Academy of Ophthalmology and Otolaryngology, College of Physicians of Philadelphia, American College of Surgeons.

The paper will cover the ophthalmologic changes associated with diabetes, the anemias, leukemias and associated conditions. Lantern slides will be used to portray the characteristic ophthalmologic features.

2:00 "Industrial Aspects of Dermatitis and Eczema"

JOHN G. DOWNING, M.D., Boston, Mass.

J. G. DOWNING

M.D. Harvard Medical School, 1915. Assistant Professor of Dermatology, Tufts College Medical School. Dermatologist at St. Elizabeth's Hospital, Boston City Hospital, Beth Israel Hospital, U. S. Public Health Service. Chairman, Section of Dermatology and Syphilology, A.M.A., 1939-40. Member, Board of Directors, American Academy of Dermatology and Syphilology. Member, American Dermatological Association, New England Dermatological Society, Society for Investigative Dermatology, Industrial Surgeons.

The physical and chemical causes in industry that are capable of producing cutaneous eruptions are classified. The method of diagnosis, including the various cutaneous tests, are discussed and evaluated. The rôle of secondary infection is analyzed, based on a study of three hundred cases. Prognosis, treatment, and prevention are discussed in detail. A few legal aspects are included.

2:30 INTERMISSION TO VIEW THE EXHIBITS

3:00 "The Medical and Surgical Significance of Avitaminosis"

THOMAS T. MACKIE, M.D., F.A.C.P., New York, N. Y.

T. T. MACKIE

A.B., Harvard; M.D., Columbia; Certificate London School of Hygiene and Tropical Medicine; D. T. M. & H. (England); Assistant Clinical Professor of Medicine, College of Physicians and Surgeons, Columbia University; Associate, Department of Public Health and Preventive Medicine, Cornell University Medical College; Attending Physician, Roosevelt Hospital; Consulting Physician, New York Infirmary for Women and Children; Consulting Physician in Tropical Medicine, Beekman Street Hospital. Societies: A.M.A. American College of Physicians, American Clinical and Climatological Association, Secretary American Gastro-Enterological Association, Royal Society of Hygiene and Tropical Medicine, President-elect American Society of Tropical Medicine.

Research in vitamin physiology has demonstrated that avitaminosis occurs in two stages. The first entails disturbance of intracellular function and consequent disturbance of normal physiology. This may be accompanied by symptoms. The second and later stage entails disturbance of structure accompanied by symptoms and by physical signs. First degree avitaminosis is common in the medical and surgical wards of a general hospital. It may result from the disease process itself, insufficiently protective therapeutic diets, and nutritional imbalance produced by conventional postoperative regimes. Avitaminosis may contribute to the disease process, and may condition the appearance of serious complications in both medical and surgical patients.

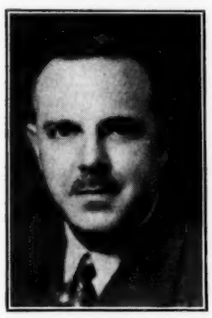
3:30 "Chemotherapy in the Acute Infectious Diseases"

JOHN A. TOOMEY, M.D., Cleveland, Ohio

Associate Professor of Pediatrics, Western Reserve University; Physician in Charge, Division of Contagious Diseases, City Hospital, Cleveland; Fellow of American Academy of Pediatrics American Pediatric Society, Society of American Bacteriology and Society of Experimental Biology and Medicine.

4:00 "Complications of Appendicitis"

ALTON OCHSNER, M.D., New Orleans, La.



ALTON OCHSNER

B.A., University of South Dakota, 1918; M.D., Washington University, St. Louis, Mo., 1920; spent 3½ years studying in Europe (Switzerland and Germany). 1927 to present time, Professor of Surgery and Head of Department of Surgery, Tulane University School of Medicine, New Orleans; Senior Visiting Surgeon and Director of Tulane Surgical Unit, Charity Hospital, New Orleans; Consulting Surgeon, Illinois Central Hospital, New Orleans; Consultant in Thoracic Surgery, Eye, Ear, Nose and Throat Hospital, New Orleans. Member numerous medical and surgical societies. Honorary member Alpha Omega Alpha; Sigma Xi; Omicron Delta Kappa; Alpha Zeta Circle (National Leadership Society);

D.Sc. (Hon.) University of South Dakota, 1936; Co-editor of Surgery, Secretary Southern Surgical Association; Regent American College of Surgeons; Member Editorial Board of International Surgical Digest; Archives of Surgery; Journal of Digestive Diseases and Nutrition; Surgery, Gynecology and Obstetrics. Author of many outstanding works.

Unfortunately, the mortality rate from appendicitis is still alarmingly high and is the result of extension of the infection beyond the confines of the appendix causing complications. Therefore, the consideration of the treatment of complications of appendicitis is of value. The most frequently encountered complication of acute appendicitis is peritonitis, which may be either localized or diffuse. The treatment consists of the prevention of ileus, the combating of infection by chemotherapeutic agents, and the prevention of toxemia. In addition to the peritonitis and its associated ileus, other complications are residual infections in the peritoneal cavity which are likely to be overlooked. These occur most frequently in the cul-de-sac of Douglas, the right iliac fossa, the subphrenic areas either above or below the liver, and on the left side of the abdomen. Each of these complications is discussed as regards the diagnosis and therapy. A final complication is portal thrombophlebitis which offers a very poor prognosis.

4:30 End of Fourth General Assembly

THE EXHIBITORS WILL REMAIN IN THEIR BOOTHS UNTIL 6:00 P. M. FOR YOUR CONVENIENCE

THURSDAY EVENING
September 26, 1940

Fifth General Assembly

(for M.S.M.S. Members Only)

Grand Ballroom, Book-Cadillac Hotel

Council Chairman: HENRY R. CARSTENS, M.D., Presiding

L. FERNALD FOSTER, M.D., Secretary

SMOKER

Admission by Card Only

P. M.

9:00

1. **The Wayne County Medical Society String Quintette**
2. **Leger de Main by Bernard W. McDougall, M.D., Detroit**
3. **The W.C.M.S. Glee Club**
4. **"Before or After"—a blackout by the W.C.M.S. Players**
5. **"The Gastro-Intestinal Tract" by Judge Robert Toms, Detroit**
6. **The W.C.M.S. String Quintette**
7. **"Instead Of"—a five-act play (one minute per act!) by the W.C.M.S. Players**
8. **The W.C.M.S. Glee Club**

10:00 DUNKING THE PRETZELS—a two-handed Skit by the entire company

Host—The Michigan State Medical Society

End of the Fifth General Assembly

FRIDAY MORNING
September 27, 1940

Sixth General Assembly

Grand Ballroom, Book-Cadillac Hotel

PREVENTIVE MEDICINE ASSEMBLY

A. H. MILLER, M.D., Presiding

L. FERNALD FOSTER, M.D., and FRANK R. MENAGH, M.D., Secretaries

A. M.

9:30 "Responsibility of the Medical Profession in Industrial Hygiene"

PAUL A. NEAL, M.D., Washington, D. C.

P. A. NEAL

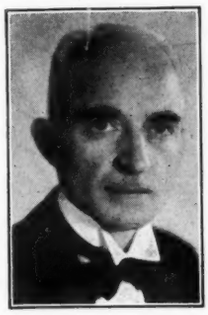
M.D., Vanderbilt University, 1927; Commissioned as Assistant Surgeon, Regular Corps, U. S. Public Health Service, 1928; 1929-34, on duty in Europe, attached to Consular Office on Foreign Quarantine detail; 1934 to present time, Division of Industrial Hygiene, National Institute of Health; at present Action Chief, Division of Industrial Hygiene. Member of A.M.A., American Public Health Association, American Association for the Advancement of Science, American Association of Industrial Physicians and Surgeons, and Association of Military Surgeons.

Due to the fact that only about 15 per cent of the workers in this country have full-time medical services provided them, the responsibility for furnishing such services is not limited to the so-called industrial physician, but is shared to a very large extent with the general practitioner. In order to fulfill his responsibility successfully, the physician must first gain a knowledge of the scope of industrial hygiene, its objectives and the functions essential in achieving these objectives. These are discussed in the paper, with special emphasis placed on the importance of industrial hygiene in conserving manpower in industry. Under normal conditions the maintenance of the health of workers is an important problem and with the increase in industrial activities envisaged in our national defense program, this problem will be magnified manifold. The opportunities of the medical profession in the field of industrial medicine are also discussed.

ACKNOWLEDGMENT: The Michigan Department of Health is sincerely thanked for its sponsorship of this lecture.

10:00 "The Primary Tuberculous Infection in Adults"

HENRY C. SWEANY, M.D., Chicago, Ill.



H. C. SWEANY

M.D., Rush Medical College, 1921. Immediately appointed to the Directorship of the Municipal Tuberculosis Sanitarium Laboratory, which position he now holds. During this time the staff was built up from four to thirty-two members (not including twenty-five volunteers). In 1929 he was U. S. delegate to the Pan-American Congress at Rio and has been appointed again this year for the same Congress at Cordova, Argentina. In 1936 he served as U. S. Delegate to the International Tuberculosis Union at Lisbon, Portugal. Has been on the National Tuberculosis Association Board many times, and in 1936 was Vice President of the National Tuberculosis Association. Member of twelve medical and scientific societies in the U. S., including the American College of Physicians, and the American Medical Association. Has certificates from the American Board of Internal Medicine and the American Board of Pathology. His publications include works in pathology and bacteriology of tuberculosis, treatment of tuberculosis, non-tuberculous lung diseases, silicosis, and blood chemistry.

The "primary tuberculous complex," as designated by Ranke, but described earlier in human beings by Parrot, Ghon and others, is generally understood as a local lesion or scar which is in direct relation to similar lesions along the course of the lymphatics towards the blood stream. This early lymphatic progress of the disease is so constant in experimental animals that it has been called the "Cornet Cohnheim law of similar adenopathies." It has been also considered the same for first infections in human beings. So far as most childhood infections are concerned this is true, but variations of dosage and age of the individual may cause such an alteration of the picture that it is not always recognized by pathologists and scarcely at all by roentgenologists and clinicians. The underlying causes, the means of identification, and importance of such "atypcial" primary infections, especially as found in adults, will be presented.

ACKNOWLEDGMENT: The Michigan Tuberculosis Association is sincerely thanked for its sponsorship of this lecture.

10:30 INTERMISSION TO VIEW THE EXHIBITS

11:00 "Hospital Organization and Staff-work as Factors in Maternal Health"

SAMUEL A. COSGROVE, M.D., Jersey City, N. J.

S. A. COSGROVE

M.D., Cornell University Medical College; 1907, Clinical Professor of Obstetrics, Faculty of Medicine, Columbia University; Medical Director and Attending Obstetrician Margaret Hague Maternity Hospital; Attending Obstetrician Jersey City Medical Center; Consulting Obstetrician Christ Hospital, Jersey City; Bayonne Hospital, Bayonne; North Hudson Hospital, Weehawken; Holy Name Hospital, Teaneck; Mountainside Hospital, Montclair; Monmouth Memorial Hospital, Long Branch; Diplomate American Board of Obstetrics and Gynecology; Fellow, American College of Surgeons; American Association of Obstetrics, Gynecology and Abdominal Surgery; American Gynecological Society; New York Obstetrical Society; New York Academy of Medicine, et cetera.

"Maternal Health" has very broad implications contributing to which are a host of sociological, economic, hygienic and medical factors. To most physicians the last is of most immediate interest. This factor alone is multifold; that which touches me, and I hope most of you, most closely, is that phase of it pertaining to the hospital and its staff. Administration, nursing service and medical staff must sympathetically cooperate for best results. Such coöperation must embrace organization, technics, control of practice and education of doctors, nurses and patients. Each of these details is outlined in a practical manner.

ACKNOWLEDGMENT: The W. K. Kellogg Foundation is sincerely thanked for its sponsorship of this lecture.

11:30 "Psychochomatic Aspects of Illness"

H. FLANDERS DUNBAR, M.D., New York City

ACKNOWLEDGMENT: The McGregor Health Foundation is sincerely thanked for its sponsorship of this lecture.

12:00 "Observations on Deficiencies of the Vitamin B Group"

L. EMMETT HOLT, JR., M.D., Baltimore, Maryland

L. E. HOLT

M.D. Johns Hopkins, 1920. Following interneship in internal medicine at Presbyterian Hospital, New York, and in pediatrics at Babies Hospital, New York, has been a member of full-time staff of the Department of Pediatrics at Johns Hopkins. He has done much investigation of disease, largely along biochemical lines. Has dealt with rickets, tetany, calcium metabolism, fat metabolism and B group of vitamins.

The paper will discuss what is known of the function of the B vitamins, particularly the three factors, thiamin, riboflavin and nicotinic acid. Attention will be called to recent additions to the clinical picture of these deficiencies to newer laboratory procedures for detecting deficiencies and to clinical interrelationships between these factors.

ACKNOWLEDGMENT: The Children's Fund of Michigan is sincerely thanked for its sponsorship of this lecture.

P. M.

12:30 End of Sixth General Assembly Luncheon

DON'T FAIL TO VISIT THE $50,000 EXHIBIT ARRANGED FOR YOU

FRIDAY AFTERNOON
September 27, 1940

Seventh General Assembly

Grand Ballroom, Book-Cadillac Hotel

J. EARL MCINTYRE, M.D., Presiding

L. FERNALD FOSTER, M.D., and O. H. GILLETT, M.D., Secretaries

P. M.

1:30 "Surgical Dyspepsias"

AMBROSE L. LOCKWOOD, M.D., Toronto, Ontario

A. L. LOCKWOOD

M.D., McGill University, 1910. Spent several years in postgraduate work in New York, London and Germany. Caught in Berlin at outbreak of the Great War—escaped and joined up with the Royal Army Medical Corps and served as a surgical specialist with them five years. Awarded the D.S.O., M.C., the Mons Star, and was three times mentioned in dispatches. After the war he returned to Mayo Clinic, and was on the Surgical Staff there till the summer of 1922, when he established his own Clinic in Toronto. Has published numerous treatises in the field of Thoracic and General Surgery, and has recently published an exhaustive summary of his experiences in War Surgery through the British Medical Journal. Member Canadian Medical Association, Ontario Medical Association, American Association for the Study of Goiter, and the Society of Military Surgeons.

Thorough routine examination of all patients from head to foot regardless of their complaints and periodic health examinations of apparently well people have greatly extended the field of the "Dyspepsias."

Greater accuracy in the diagnosis of diseases of the gastrointestinal tract has revealed serious conditions overlooked hitherto, and has materially increased the problems that perplex the profession in determining the cause, course, and measures for relief of symptoms vaguely referred to as the "dyspepsias." In addition, there has been for fifteen years a pleasing and ever decreasing mortality in dealing surgically with these so-called "surgical dyspepsias."

2:00 "Broncho-Esophagology in Relation to General Practice"

CHEVALIER L. JACKSON, M.D., Philadelphia, Pa.

C. L. JACKSON

M.D., University of Pennsylvania, 1926; M.Sc. (Med.) Graduate School of Medicine, University of Pennsylvania, 1930. Professor of Broncho-Esophagology, Temple University School of Medicine and Hospital; Bronchoscopist to Lankenau Hospital and Mary J. Drexel Home, Chestnut Hill Hospital, Eagleville Sanatorium and Hospital; Consultant in Bronchoscopy, Montgomery Hospital, Norristown, Pa. Fellow American Academy of Ophthalmology and Otolaryngology; American Laryngological Association; American Broncho-Esophagological Association; American Association for Thoracic Surgery; American College of Surgeons; American Laryngological, Rhinological and Otological Society, and many medical societies in America and abroad.

Too many family physicians still look upon bronchoscopy and esophagoscopy as stunts, curiosities of medicine. As a matter of fact, these procedures as well as the new branch of medicine that they have been largely responsible for developing — broncho-esophagology—are making very significant contributions which should be part of the common knowledge of the well informed practitioner. For example, since we have learned something about bronchology, we know that many things may cause a wheeze besides asthma—"all is not asthma that wheezes"—a wheeze may mean "anything from peanuts to cancer." It is also true that, since we have learned something about esophagology, we are less likely to make a diagnosis of hysteria when a patient develops dysphagia from an esophageal cancer. Practical points in connection with the diagnosis and treatment of thoracic disease have resulted from the development of broncho-esophagology, which comprises the sum total of our knowledge of the bronchi and esophagus—the anatomy, physiology, pathology, clinical diagnosis and treatment of bronchial and esophageal disease.

2:30 INTERMISSION TO VIEW THE EXHIBITS

3:00 "Tumors of the Scalp and Skull and Their Significance as Revealed by Roentgenograms"

JOHN D. CAMP, M.D., Rochester, Minn.

J. D. CAMP

M.D., Boston University, 1922; Fellow in Roentgenology, Mayo Foundation, 1922-24; Assistant Roentgenologist, Massachusetts General Hospital, 1924-27; Visiting Roentgenologist Massachusetts General Hospital, 1927-28; Assistant in Roentgenology, Harvard Medical School, 1924-28; Associate Roentgenologist, Mayo Clinic at present. Associate Professor of Radiology, Mayo Foundation, University of Minnesota. Lieut. Commander U. S. Naval Reserve; Fellow American College of Radiology; Diplomate American Board of Radiology; Member American Medical Association, The Radiological Society of North America (Pres. 1937), the American Roentgen Ray Society, Sigma Xi.

Tumors of the scalp may be grouped as benign and malignant and further divided into those which are limited to the scalp itself and those which are manifestations of underlying lesions in the skull. The latter group is particularly important because the tumor masses are often the result of intracranial disease or malformations, constitutional disorders or disseminated skeletal lesions. Experience indicates that without roentgenograms the differentiation of tumors involving the scalp is not to be depended on and the removal of tumors of the scalp without a roentgenologic check on the extent of the lesion may be hazardous. The importance of the x-ray examination will be shown by means of representative cases and the roentgenologic features of the lesions involved will be discussed in detail.

3:30 "The Present Status of Endocrinology in Gynecology"

JACOB P. GREENHILL, M.D., Chicago, Ill.

J. P. GREENHILL

M.D., Johns Hopkins Medical School, 1919; Professor and Vice Chairman, Department of Obstetrics and Gynecology, Loyola University Medical School; Professor Gynecology, Cook County Graduate School of Medicine; Attending Gynecologist Cook County Hospital; Member American Association Obstetricians, Gynecologists and Abdominal Surgeons, Chicago Gynecological Society, Central Association of Obstetricians and Gynecologists, Johns Hopkins Surgical Society, American Association of Anatomists, and others. Author of "Office Gynecology," Year Book Publishers, Chicago, 1939; Editor of "Gynecology," Year Book of Obstetrics and Gynecology.

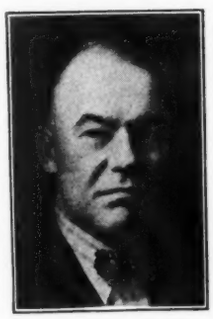
The clinical application of endocrine therapy in gynecology is confusing. The chief reason for this is

excessive enthusiasm based upon laboratory experiments and insufficient human controls. The indications for endocrine therapy in gynecology are limited in number. The pituitary hormones have a most restricted field of activity. The anterior pituitary-like hormones have a beneficial effect in some cases of functional uterine bleeding. The gonadotropic hormones found in pregnant mare serum will produce ovulation in some cases. Estrogen is of use for disturbances of the menopause, gonorrheal vulvo-vaginitis and some cases of senile vaginitis and pruritus vulvæ. Progesterone is helpful in some cases of threatened abortion, habitual abortion, dysmenorrhea and premenstrual tension. The male hormone testosterone proprionate is of value in some cases of excessive uterine bleeding, dysmenorrhea, premenstrual painful breasts and premenstrual tension. Thyroid therapy is helpful in many gynecological disturbances.

In order to use hormone therapy intelligently it is important to understand the physiology of the preparations used.

4:00 "The Changing Picture of Diabetes"

REGINALD FITZ, M.D., Boston, Mass.



REG. FITZ

Lecturer on the History of Medicine, Harvard Medical School; Member Council on Medical Education and Hospitals, American Medical Association; Member Board of Regents, American College of Physicians; Member American Board of Internal Medicine; Consulting Physician, Peter Bent Brigham Hospital, Boston.

The picture of diabetes has changed remarkably in the last thirty years. Because of insulin diabetic patients live to be observed for long periods of time. The complications of diabetes have become the important feature of the disease rather than the disease itself. By recognizing complications early—surgical complications, vascular complications or the early stages of diseases like cancer which may develop in the diabetic individual entirely independent of diabetes—steps may be taken to practice intelligent preventive medicine and thus to afford the diabetic as good if not a better life expectancy than can be afforded his non-diabetic friend. These facts are well brought out by comparing diabetes as Naunyn saw it in 1906 with diabetes as any modern doctor sees it today.

4:30 End of Sixth General Assembly

END OF THE CONVENTION

INDUSTRIAL HEALTH AND PREPAREDNESS

The keynote of the Detroit meeting of the Industrial Physicians and Surgeons, held coincident with the 75th Annual Meeting of the Michigan State Medical Society, will be Industrial Medicine in relation to Medical-Military Problems.

The Industrial Association will hold its clinic and lectures at Harper Hospital, Detroit, Tuesday, September 24, 9 A. M. to 4 P. M. The banquet at 6:30 P. M. will be held at the Book-Cadillac Hotel.

With the possible imminence of mobilization, many industrial health problems confront the nation. Those physicians who know how to solve these problems will be in demand by the government. All M.S.M.S. members are invited to the sessions of the Michigan Association of Industrial Physicians and Surgeons. (Program on page 708).

TECHNICAL EXHIBITS

Abbott Laboratories **Space No. 32**
North Chicago, Illinois

Abbott Laboratories, North Chicago, Illinois, cordially invite all members of the profession and associates to call at their exhibit in space No. 32 to become acquainted with their latest research products, including anesthetics, antiseptics, hypnotics and chemotherapeutic specialties. Professional representatives will be on hand to answer all queries. A hearty welcome awaits you.

A. S. Aloe Company **Space No. 80**
St. Louis, Missouri

The A. S. Aloe Company will exhibit an unsually complete showing of general equipment for doctors and hospitals, featuring an interesting diorama of Steeline furniture for the treatment room. Interesting specialties will be shown, including the Washington University Portable Obstetric Table. Aloe representatives, E. E. Davis and M. R. Pregerson, will be in charge of the display.

The Arlington Chemical Company **Space No. 53**
Yonkers, New York

The Arlington Chemical Company invites you to inspect their line of Proteins and Pollens for the diagnosis and treatment of allergic conditions; also their Pharmaceutical Products, including Aminoids —a combination of amino acids of therapeutic value in malnutrition, underweight and loss of appetite. Dr. Frazer and Dr. Kitzman will be happy to discuss allergy problems.

The Baker Laboratories **Space No. 58**
Cleveland, Ohio

Baker's complete line of infant foods are on display. Baker's **Modified Milk** (powder and liquid) is a completely prepared milk in which the composition as well as the proportions of the protein, fat, carbohydrate, vitamin and mineral content have been so altered and adjusted as to closely simulate breast milk. **Melcose** is also a completely prepared milk (liquid only) and very economical. **Melodex** (maltose and dextrin) is made especially for modifying fresh or evaporated milk formulas.

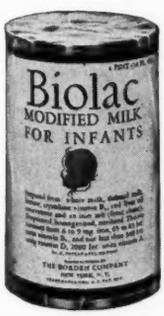
Bard-Parker Company **Space No. 66**
Danbury, Connecticut

Bard-Parker will exhibit the following products: Rib-Back surgical blades; Renewable Edge Scissors; Hematological Case for obtaining blood samples at the bedside; Ortholator for obtaining accurate dental radiographs; Formaldehyde Germicide and Instrument Containers for the rust-proof sterilization of surgical instruments.

Barry Allergy Laboratory, Inc. **Space No. 35**
Detroit, Michigan

Barry Allergy Laboratory, Inc., will display diagnostic and individualized services for the various specialties bordering or connecting with allergy, as well as its materials, which can be easily used by the general practitioner. Individualized treatment based on the patient's individual skin test reactions and history will be stressed.

The Borden Company **Space No. 61**
New York, New York



Full information on **Biolac,** the new **liquid** modified milk for infants, will be available at the Borden Booth. Also exhibited will be other Borden products for infant feeding, notably Klim, Dryco, Special Dryco, Beta Lactose, Merrell-Soule Products and Borden's Irradiated Evaporated Milks.

The Burrows Company **Space No. 51**
Chicago, Illinois

The Burrows Company will feature the new and amazing "Major" Plaster Bandage, the cast material that is removed without the aid of any instruments. Other features will include: The Duod-O-Vac (Au-

tomatic Siphon Suction Apparatus)—The Superior Electric Breast Pump—and the Superior Suction and Ether Unit.

Cameron Surgical Specialty Company **Space No. 40**
Chicago, Illinois

See the new Cameron Color-Flash Clinical Camera, the Projectoray and the latest Cameron-Lempert Headlite. Latest developments in electrically lighted Diagnostic and Operating instruments for all parts of the body will also be shown. Of special interest will be the new inexpensive office model Radio Knife and other electro-surgical units.

S. H. Camp & Company **Space No. 17**
Jackson, Michigan

If you are interested in scientific supports, this is an invitation to investigate Camp Supports for prenatal, postnatal, visceroptosis, hernia and orthopedic conditions. There are new additional useful ideas in designs that will interest you.

The Coca-Cola Company **Space No. 74**
Atlanta, Georgia

Coca-Cola will be served to the physicians with the compliments of the Coca-Cola Company.

Cottrell-Clarke, Inc. **Space No. 15**
Detroit, Michigan

Cottrell-Clarke, Inc., Detroit, or the Physicians' Stationery Company (their former corporate name) as they were long familiarly known to our own Michigan medical men, will show many new, interesting developments in case records and case record keeping at this year's M.S.M.S. exhibit.

R. B. Davis Company **Space No. 75**
Hoboken, New Jersey

You are invited to enjoy a drink of delicious Cocomalt at the R. B. Davis Booth. Cocamalt is refreshing, nourishing and of the highest quality. It has a rich content of Vitamins A, B_1 and D, Calcium and Phosphorus to aid in the development of strong bones and sound teeth; Iron for blood; Protein for strength and muscle; Carbohydrate for energy.

Detroit X-Ray Sales Company **Spaces No. 69-70**
Detroit, Michigan

The Detroit X-Ray Sales Company will have on display a new design of automatically controlled X-Ray equipment for the general practitioner, which will be of interest. The medical profession is cordially invited to witness demonstrations of this latest proof that **Mattern,** as usual, is again a step ahead in the x-ray field.

Duke Laboratories, Inc. **Space No. 24**
Stamford, Connecticut

The Duke Laboratories, Inc., will demonstrate the original, American-made, stretchable, adhesive-surfaced bandage, Elastoplast, approved by the American College of Surgeons. Elastoplast is used whenever compression and support are required, and is rapidly taking the place of the Unna Boot in the treatment of varicose ulcers. Samples of Mediplast, the Elastoplast speed compress, and the Elastoplast Occlusive Dressings, used in the treatment of minor injuries, may be had. Samples of Nivea and Basis Soap—the prescriber's cosmetics, may also be had.

H. G. Fischer & Company **Space No. 7**
Chicago, Illinois

H. G. Fischer & Co. 1940 models of x-ray and short wave apparatus are so distinctive, both in improved performance and in various instances greatly lowered in price, that every physician should consider inspection a convention obligation. The complete H. G. Fischer & Co. line includes shockproof x-ray apparatus, short wave units, combination cabinets, galvanic and wave generators, ultra violet and infra-red lamps and many other units, accessories and supplies. Physicians attending the convention are invited to ask for demonstrations of apparatus in which they are interested and to consult with Fischer representative regarding technics made available by Fischer apparatus.

General Electric X-Ray Corporation **Space No. 54**
Detroit, Michigan

We cordially invite the physicians and their wives who attend this meeting to make use of the lounge facilities provided at our booth for their comfort. We particularly look forward to a visit from our customers and invite all physicians who may have technical problems, to discuss them with our staff in attendance. For those who are interested, we would welcome the opportunity to tell you of our contribution in new and improved physiotherapy and x-ray equipment since the 1939 State Meeting.

Gerber Products Company **Space No. 41**
Fremont, Michigan

Ten new foods which have just been added to the Gerber Foods will be on display in the Gerber Booth. Copies of both the professional literature and the booklets for mothers are there for your examination and will be sent to you on request.

Hack Shoe Company **Space No. 26**
Detroit, Michigan

Hack's Prescription Shoe Service will again present its annual display of correct shoes for men, women and children. Designed for style but built for comfort, Hack Shoes are worn by an increasingly large number of doctors, their wives and families. Located on the 5th floor of the Stroh Building at 28 West Adams Avenue (on Grand Circus Park) in Detroit, the Hack Shoe Company is conveniently located for those attending the convention.

Hanovia Chemical and Mfg. Company **Space No. 33**
Newark, New Jersey

The very latest in ultra-violet equipment will be demonstrated, including the outstanding uses of ultra-violet radiation in the fields of science, medicine and public health. Don't fail to see our new line of self-lighting ultra-violet high-pressure mercury arc lamps, Short and Ultra Short wave apparatus, Sollux Radiant Heat Lamps and our latest development, quartz ultra-violet lamps for air sanitation.

The J. F. Hartz Co. **Spaces No. 55-56-57**
Detroit, Michigan

Greetings to our medical friends! For over forty years it has been the privilege of the J. F. Hartz Company to serve you and your patient.
May we ask your attendance at our display, which is occupying enlarged space during this convention? We manufacture a fine line of pharmaceuticals and ampules under strict laboratory control, as is evidenced by no citations from either the State or Federal Food and Drug Departments. We also direct your attention to the Hartz-o-therm, a low-price, efficient short wave which has met with the approval of the profession.

H. J. Heinz Company **Space No. 11**
Pittsburgh, Pennsylvania

Physicians interested in prescribing soft diets will be interested in the new Heinz exhibit where Strained and Junior Foods are attractively displayed. Miss Elizabeth Elder, Mr. L. A. Davis and Mr. E. J. Cooley are in attendance and will be happy to supply information on these foods.

Holland-Rantos Company **Space No. 81**
New York, New York

Modern contraceptive technics will be demonstrated at the booth of the Holland-Rantos Company based on the use of medically approved contraceptives — the Koromex diaphragm, the Koromex jelly, the H-R Emulsion jelly, and many other of the well known products of this company.

The display will incorporate a motion picture on this subject and another motion picture on the diagnosis and treatment of Trichomonas Vaginalis Vaginitis. Please be sure to call and get your copy of the Physician's Guide and samples of the Koromex and H-R Emulsion jelly.

Horlick's Malted Milk Corp. **Space No. 31**
Racine, Wisconsin

The remarkable digestibility of Horlick's even in difficult cases of infant and invalid diet has long been known. Recent laboratory tests show that the curd tension of Horlick's prepared with water is practically zero. Horlick's used as a modifier for milk also registered a lower curd tension than plain milk alone. This ease of digestion coupled with high nutritive value, derived both from full-cream milk and malted grain, have made Horlick's especially useful as a food-drink in fevers, post-operative cases and for the aged. Note especially the unique convenience of the Tablets for regular feeding of ambulatory cases of peptic ulcer.
You are cordially invited to visit our exhibit in Detroit.

The G. A. Ingram Company **Spaces No. 63-64-65**
Detroit, Michigan

The G. A. Ingram Company will, as usual, have several items of interest on display at their booth. Several new Burdick physiotherapy units will be on display, which will be of interest to everyone.

Jones Metabolism Equipment Co. **Space No. 9**
Chicago, Illinois

Exhibit will be in charge of one who is fully competent to discuss the wider scope of the uses of the metabolism test and its clinical interpretation. The mechanical features which have long been exclusively those of the Motor Basal will be demonstrated together with refinements which have still further assured leadership of the Motor Basal in the metabolism field.

A. Kuhlman & Company **Spaces No. 27-28**
Detroit, Michigan

A. Kuhlman & Company will demonstrate a new Waterless Basal Metabolism Apparatus, a new low-priced Portable Electro Cardiograph Apparatus, Modern Office Furniture, a number of Urological Specialties, and a selected line of Surgical Instruments.

Lea & Febiger **Space No. 36**
Philadelphia, Pennsylvania

Lea & Febiger will exhibit the following new works: Adair's Obstetrics and Gynecology, Clement's Anesthesia, Comroe on Arthritis, Eller on Tumors of the Skin, Hayden on The Rectum and Colon, Lewin on The Foot and Ankle, Master's Electrocardiogram, A Trudeau Foundation Study—Artificial Pneumothorax, Rony on Obesity and Leanness, Schwartz & Tulipan on Occupational Diseases of the Skin, Thienes' Toxicology, Vaughan on Cleft Lip. Advance material will be shown on Anderson's Diagnosis, Ballenger's Otology and Dennie & Pakula on Congenital Syphilis. New editions of many standard works will also be shown.

Lederle Laboratories, Inc. **Space No. 12**
New York, New York

The exhibit will feature a motion picture on post-encephalitic Parkinsonism and the response to treatment with Bellabulgara (Bulgarian Belladona). There will also be displayed Pharmaceutical Specialties together with Serums and Globulin Modified Antitoxins. All physicians are cordially invited to attend the booth and view the film on treatment of the Parkinson Syndrome.

Libby, McNeill & Libby **Spaces No. 76-77**
Chicago, Illinois

The exhibit of Libby, McNeill & Libby will feature a novel presentation of the story of Libby's specially homogenized Baby Foods and Libby's Evaporated Milk. A marionette stage occupies a prominent position in the booth. The action of the puppets is synchronized with a sound slide film so that the story is both pictorial and verbal. Doctors hear the story by listening in at handily placed cradle telephones. This presentation is supplemented by illuminated photomicrographs and displays of the Libby products which are being so widely used in infant feeding.

Liebel-Flarsheim **Space No. 3**
Cincinnati, Ohio

Liebel-Flarsheim will exhibit a complete line of the well-known Short Wave Generators, as well as the famous Bovie Electro-Surgical Units and the Raysun Ultra-Violet and Infra-Red Therpeutic Lamp.

A cordial invitation is extended to visit the Liebel-Flarsheim Booth to inspect this new apparatus and have it demonstrated to you.

Eli Lilly & Company **Space No. 71**
Indianapolis, Indiana

Eli Lilly and Company produced the first commercial preparation of Insulin, contributed to development of liver therapy, and has been responsible for many other therapeutic advancements. Information concerning all Lilly products will be available at the Lilly exhibit where "Merthiolate" (Sodium Ethyl Mercuri Thiosalicylate, Lilly), "Sodium Amytal" (Sodium Iso-amy Ethyl Barbiturate, Lilly), and other important products will be featured.

J. B. Lippincott Company **Space No. 2**
Philadelphia, Pennsylvania

Among the newer Lippincott publications on display will be the widely acclaimed "Modern Dermatology and Syphilology" by Becker and Obermayer, and, of course, the phenomenally successful Thorek's "Modern Surgical Technic." Other important new works include Dickson and Diveley's "Functional Disorders of the Foot," Scudder's "Shock," and Barborka's "Treatment by Diet." Every physician who has children among his patients will welcome Kigelmass' "Newer Nutrition in Pediatric Practice."

M & R Dietetic Laboratories, Inc. **Space No. 43**
Columbus, Ohio

Similac, a food for infants deprived partially or entirely of maternal milk, will be displayed by M & R Dietetic Laboratories, Inc. Messrs. D. O. Cox and L. A. MacDonald will appreciate the opportunity to discuss the merit and suggested application of this product for the normal or special case.

Mead Johnson & Company **Spaces No. 72-73**
Evansville, Indiana

Servamus Fidem. Mead Johnson & Company will exhibit several new products in addition to Dextro-Maltose, Pablum and Oleum Percomorphum. They will also have on display various examples of the slogan "Servamus Fidem"—We Are Keeping the Faith.

Medical Arts Surgical Supply Company
Grand Rapids, Michigan **Spaces No. 59-60**

The Medical Arts Surgical Supply will display a fine representation of modern office equipment, including some of Grand Rapids' own office desks and chairs. A very complete line of stainless steel instruments will be shown, also the new McKesson metabolor and numerous suction pumps.

Medical Case History Bureau **Space No. 25**
New York, New York

Economical Case History System. In addition to the economy factor, the Info-Dex Record Control System features a really ingenious yet simple diagnostic guide. Info-Dex catalogs histories, developments and diagnoses in such a manner that they are instantly available for reference. An exhibit of this compact, efficient filing system may be found in Booth No. 25. A few minutes spent in studying the advantages of modern medical filing will be repaid many times in increased office efficiency.

Medical Protective Company **Space No. 16**
Wheaton, Illinois

The most exacting requirements of adequate liability protection are those of the professional and liability field. The Medical Protective Company, specialists in providing protection for professional men, invites you to confer, at their exhibit, with the representatives there: Mr. A. G. Schulz, Mr. J. O. Wilson and Mr. O. N. Harten. They are thoroughly trained in Professional Liability underwriting.

The Mennen Company **Space No. 67**
Newark, New Jersey

The Mennen Company will exhibit their two baby products—Antiseptic Oil and Antiseptic Borated Powder. The Antiseptic Oil is now being used routinely by more than 90 per cent of the hospitals that are important in maternity work. Be sure to register at the Mennen exhibit and receive your kit containing demonstration sizes of their shaving and after-shave products.

Merck & Company, Inc. **Space No. 13**
Rahway, New Jersey

Merck & Co., Inc., are featuring the following preparations at their exhibit: The Vitamins—individual vitamins of the B complex, including those recently synthesized in the Merck Research Laboratories—Vitamin B_6 and Pantothenic Acid. Erythrol Tetranitrate Merck—for arterial hypertension—new, improved tablets. Mecholyl—for the treatment of arthritis and chronic ulcers by the method of iontophoresis. Vinethene—an inhalation anesthetic agent for short operative procedures. Information on Merck Medicinal Specialties, Prescription Chemicals, Vitamins, and other Merck products may be obtained at the Merck booth.

The Wm. S. Merrell Company **Space No. 44**
Cincinnati, Ohio

The Merrell exhibit will feature new prescription specialties of timely interest, in addition to several well-known therapeutic agents of established usefulness. Physicians are invited to drop by for a personal supply of Catarrhal Oravax, for protection against the common cold.

Michigan Medical Service **Space No. 68**
Michigan Hospital Service
Detroit, Michigan

Visit this booth where representatives will distribute literature and explain the Medical Service Plan and the Surgical Benefit Plan of Michigan Medical Service and the Hospital Service Plan of Michigan Hospital Service. A chart explaining in detail the necessary "paper work" of the attending physician will be displayed. Doctor, come in and see what your organization and the hospitals' organization are doing *(See page 596).*

C. V. Mosby Company **Space No. 50**
St. Louis, Missouri

Doctors attending the Michigan State Medical Society Convention are cordially invited to visit the Mosby Booth—there to inspect the new publications which will be on display. Outstanding new volumes on surgery, allergy, dermatology, operative orthopedics, nervous and mental diseases, heart diseases, x-ray, gynecology and obstetrics, materia medica, and practice of medicine will be shown. Browse through this new material at the Mosby Booth.

The Muller Laboratories **Space No. 52**
Baltimore, Maryland

Mull-Soy will be shown at the Muller Booth. The many merits of this soy bean milk-substitute in the diets of those persons—infants, children and adults—who are allergic to cow's milk will be explained, as well as the other uses for this interesting product.

Parke, Davis & Company **Spaces No. 18-19-20-21**
Detroit, Michigan

Featured in the Parke, Davis Exhibit will be the sex hormones, Theelin and Theelol; antisyphilitic agents, such as Mapharsen and Thio-Bismol; posterior lobe preparation, including Pituitrin, Pitocin and Pitressin; and various Adrenalin Chloride preparations.

The Pelton & Crane Company **Spaces No. 37-38**
Detroit, Michigan

Watch for the new Pelton "E & O" Surgical Light in this year's Pelton & Crane Exhibit. Pelton engineers have done away with old-fashioned rear-adjustments, provided cool, color-corrected beams that penetrate from two directions and defy obstruction, and finished their amazingly low-priced masterpiece in Duranite and chrome. Attracting attention also will be the Pelton FL (6″) Autoclave.

Pet Milk Sales Corp. **Spaces No. 29-30**
St. Louis, Missouri

An actual working model of a milk condensing plant in miniature will be exhibited by the Pet Milk Company. This exhibit offers an opportunity to obtain information about the production of Irradiated Pet Milk and its uses in infant feeding and general dietary practice. Miniature Pet Milk cans will be given to each physician who visits the Pet Milk Booth.

Petrolagar Laboratories, Inc. **Space No. 23**
Chicago, Illinois

This year Booth No. 23 will be occupied by Petrolagar Laboratories, Inc., who offer, in addition to samples of the Five Types of Petrolagar, an interesting selection of descriptive literature and anatomical charts. Ask Mr. L. F. Harrison or Mr. R. L. Corkery to show you the new Habit Time booklet. It is a welcome aid for teaching bowel regularity to your patients.

Philip Morris & Company **Space No. 42**
New York, N. Y.

Philip Morris & Company will demonstrate the method by which it was found that Philip Morris Cigarettes, in which diethylene glycol is used as the hygroscopic agent, are less irritating than other cigarettes. Their representative will be happy to discuss researches on this subject, and problems on the physiological effects of smoking.

Professional Management **Space No. 1**
Battle Creek, Michigan

PM

Henry C. Black and Allison E. Skaggs of Professional Management will again be available for Free Consultation Service with members of the Michigan State Medical Society. Bring your professional and business problems to them for confidential discussion.

Ralston Purina Company, Inc. **Space No. 6**
St. Louis Missouri

The makers of Ry-Krisp have Low Calorie and Allergy Diets available to the profession in quantity. Of special interest is a new book on grains and their part in the American dietary. Samples of Ralston, the natural wheat cereal naturally fortified with wheat germ, and Ry-Krisp, the whole rye wafer, also available.

Frank N. Ruslander **Space No. 82**
Detroit, Michigan

Exhibit of Medical Photography, featuring the value of photography to the medical profession. Photographs for teaching, by means of slides, illustrations for case histories and published articles, et cetera, will be shown. The application of color photography to all branches of medicine and surgery will be demonstrated. Proper preparation of charts, typed material and drawings for lantern slides will also be displayed.

W. B. Saunders Company **Space No. 14**
Philadelphia, Pennsylvania

These publishers will have an exhibit unusually attractive to the medical profession because of the great number of brand new books and new editions which they will show. Included among these are: Buckstein's "X-Ray of the Alimentary Tract," Wilder's "Diabetes Mellitus," Walters & Snell's "Diseases of the Gallbladder," "Interpretation of Electrocardiograms" by Paul White and Ashton Graybiel, new edition of Levine's "Clinical Heart Disease," and many others.

Schering Corporation **Space No. 49**
Bloomfield, New Jersey

Representatives will be pleased to discuss latest developments in hormone therapy. New products on display will be Cortate (desoxycorticosterone acetate), Anteron (gonadotropic hormone from mares' serum), Pranturon (gonadotropic hormone from pregnancy urine), Pranone (orally effective progestin) as well as the other well-known Schering preparations—Progynon-B, Progynon-DH, Proluton, Oreton, and Neo-Iopax.

Scientific Sugars Co. **Space No. 47**
Columbus, Indiana

Representatives of the Scientific Sugars Company will welcome the Michigan doctors at its booth, where Cartose, Hidex, and Kinney's Yeast Extract, liquid and tablets, will be on display. Also, new preparations of interest to the physicians will be shown.

Sharp & Dohme **Space No. 39**
Philadelphia, Pennsylvania

Sharp & Dohme will have their new modern display at Detroit this year, featuring Propadrine Hydrochloride Products, "Lyovac" Bee Venom Solution, and other "Lyovac" Biologicals. There will also be on display a group of new pharmaceutical specialties and biologicals prepared by this house, such as Rabellon, Daldrin, Padrophyll, Elixir Propadrine Hydrochloride, Riona, Depropanex, and Ribothiron. Capable, well-informed representatives will be on hand to welcome physicians and furnish information on Sharp and Dohme products.

S.M.A. Corporation **Space No. 22**
Chicago, Illinois

Among the technical exhibits at the convention this year is an interesting new display, which represents the selection of infant feeding and vitamin products of the S.M.A. Corporation. Physicians who visit this exhibit may obtain complete information, as well as samples, of S.M.A. Powder and the special milk preparations—Protein S.M.A. (acidulated), Alerdex and Hypo-Allergic Milk.

Smith, Kline & French Laboratories **Space No. 10**
Philadelphia, Pennsylvania

No Registration Required. Up-to-date information about "Benzedrine Inhaler," "Benzedrine Sulfate," "Benzedrine Solution," Pentnucleotide, Feosol Tablets and Elixir, Oxo-ate "B," Eskay's Neuro Phosphates and "Paredrine Hydrobromide with Boric Acid Ophthalmic" may be obtained in convenient envelopes from literature dispensers. If additional data are desired, the representative will be glad to answer any questions.

E. R. Squibb & Sons **Space No. 8**
New York, New York

Physicians attending the Michigan State Medical Society meeting are cordially invited to visit the Squibb Exhibit. The complete line of Squibb Vitamin, Glandular, Arsenical and Biological Products and Specialties, as well as a number of interesting new items, will be featured. Well-informed Squibb Representatives will be on hand to welcome you and to furnish any information desired on the products displayed.

Frederick Stearns & Company **Spaces No. 45-46**
Detroit, Michigan

Doctors are cordially invited to visit our attractive convention booth to view and discuss outstanding contributions to medical science developed in the Scientific Laboratories of Frederick Stearns & Company. Our professional representatives will be pleased to supply all possible information on the use of such outstanding products as Neo-Synephrin Hydrochloride for intranasal use, Mucilose (flakes and granules) for bulk and lubrication, Insulin-Stearns, Gastric Mucin, Trimax and Sulfanilamide tablets. A complete line of Vitamin products will also be displayed.

Charles C Thomas, Publisher **Space No. 78**
Springfield, Illinois

New books to be displayed by Charles C Thomas include: McLellan's "Neurogenic Bladder"; Barnes' "Electrocardiographic Patterns"; Pancoast, Pendergrass, and Schaeffer's "The Head and Neck in Roentgen Diagnosis"; Roesler's "Atlas of Cardioroentgenology"; Sulzberger's "Dermatologic Allergy"; Joachim's "Practical Bedside Diagnosis and Treatment"; Steindler's "Orthopedic Operations"; Rankin and Graham's "Cancer of the Colon and Rectum"; McNeill's "Roentgen Technique"; Harkin's "Treatment of Burns"; Hamblen's "Endocrine Gynecology."

U. S. Standard Products Company **Space No. 34**
Woodworth, Wisconsin

The U. S. Standard Products Company will have a display at the Michigan State Medical meeting in September. Their Michigan representative will be present to greet you and a few minutes spent at this booth will be enjoyable to you and greatly appreciated by the company.

Vernor's Ginger Ale **Space No. 4**
Detroit, Michigan

The James Vernor Co. will continue to bring to the attention of the physicians of Michigan the unique high quality of its product as well as its important contribution in the field of medicine. Members will be invited to enjoy Vernor's and receive literature. The display should also be attractive.

Wall Chemicals Corporation **Space No. 79**
Detroit, Michigan

Wall Chemicals Corporation, a division of the Liquid Carbonic Corporation, will have on display a quantity of compressed gas anesthetics and resuscitants. There will also be a complete line of oxygen therapy equipment including the "Walco" oxygen humidifier, for the nasal administration of oxygen, and the "Walco" oxygen face mask.

Westinghouse X-Ray Company, Inc. **Space No. 62**
Detroit, Michigan

Westinghouse X-Ray Company will exhibit for the first time in the middle west the new Simplex Unit. This Unit is the latest development in high-powered shockproof diagnostic equipment for both vertical and horizontal fluoroscopic and radiographic work. It is economical in its space requirements and economical in use.

John Wyeth & Brother, Inc. **Space No. 5**
Philadelphia, Pennsylvania

You are cordially invited to visit the John Wyeth and Brother exhibit, where the following pharmaceutical specialties will be exhibited: Amphojel (Wyeth's Alumina Gel) for the treatment of hyperacidity and peptic ulcers; Alulotion Ammoniated Mercury with Kaolin for the treatment of impetigo; Bepron, Wyeth's Beef Liver with Iron for the nutritional anemias; Bewon Elixir, the palatable appetite stimulate and vehicle; Kaomagma Wyeth's Magma of Alumina and Kaolin for the management of diarrhea and colloitis; Mucara for the treatment of intestinal stasis.

Zimmer Manufacturing Company **Space No. 48**
Warsaw, Indiana

Zimmer Manufacturing Company will exhibit a complete line of Fracture Equipment. Mr. Fisher will be in charge of the booth, and will gladly demonstrate any of the items on display. The Luck Bone Saw, Adjustable Reamers and Hip Cups will be among the new instruments on exhibition.

ANNOUNCEMENT

The Neuro-Psychiatric Institute of the Hartford Retreat announces the following appointments to its professional and assisting staffs:

PROFESSIONAL STAFF

Psychiatrist-in-Chief
C. Charles Burlingame, M.D., F.A.C.P.
Associate Psychiatrist
Leslie R. Angus, M.D.
Associate Psychiatrist
Orin R. Yost, M.D.
Associate Psychiatrist
H. Ryle Lewis, M.D.
Senior Psychiatrist
Edward L. Brennan, M.D.
Senior Psychiatrist
William G. Young, M.D.
Senior Psychiatrist
Ralph T. Collins, M.D.
Psychiatrist Gordon H. Hutton, M.D.
Psychiatrist Paul L. Phillips, M.D.
Psychiatrist Ralph M. Stolzheise, M.D.
Psychiatrist Robert L. Wagner, M.D.
Psychiatrist John W. Bick, M.D.
Fellow in Psychiatry
Maurice D. Spottswood, M.D.
Fellow in Psychiatry
Raymond L. Osborne, M.D.
Fellow in Psychiatry
John M. Cotton, M.D.
Fellow in Psychiatry
Max Hayman, M.D.
Fellow in Psychiatry
Holmes E. Perrine, M.D.
Fellow in Psychiatry
Harry L. MacKinnon, M.D.
Fellow in Psychiatry
Robert J. Streitwieser, M.D.
Psychologist
Blake D. Prescott, B.A., M.A., M.D.
Assistant Psychologist
Marie C. Morgan, B.A.
Research Associate in Endocrinology
Majorie B. Patterson, B.S.
Research Associate in Psychology
Walter C. Shipley, A.B., M.A., Ph.D.
Research Associate in Biochemistry
Albert Kondritzer, A.B., M.S., Ph.D.
Oculist Harry St. C. Reynolds, M.D.
Internist John G. Martin, M.D.
Gynecologist
Louis F. Middlebrook, M.D.
Dentist George B. Odlum, D.M.D.
Physician, Employees' Health Service
William A. Wilson, M.D.

THE ASSISTING STAFF

Assistant to the Psychiatrist-in-Chief
Stella H. Netherwood, R.N.
2nd Assistant to the Psychiatrist-in-Chief
Mildred E. LaBombard
Secretary to the Psychiatrist-in-Chief
Adelaide Ray
Secretary to the Psychiatrist-in-Chief
Ena Greenstreet
Secretary to the Psychiatrist-in-Chief
Pauline Kline
Introductor Mary V. Cronin, R.N.
Assistant Introductor
Evelyn B. Dunlap, R.N.
Assistant Introductor
Josephine LiVecchi, B.A.
Consulting Director of Nursing
Annie W. Goodrich, M.A., ScD., R.N.
Director of Nursing
Elsie C. Ogilvie, R.N.
Associate Director of Nursing
Mary E. Curtis, B.N., R.N.
Director of Nursing Education
Ruth L. Dingman, B.N., R.N.
Director of Nursing Education
Jean MacLean, B.S., B.N., R.N.
Nursing Supervisor
Mary Giannettino, R.N.
Nursing Supervisor
Alice Giannettino, R.N.
Nursing Supervisor
Margaret L. Fehr, R.N.
Nursing Supervisor
Erma D. Johnson, R.N.
Nursing Supervisor
Constance Smithwick, R.N.
Nursing Supervisor
Harold R. Towne, R.N.
Nursing Supervisor
Louise M. Perry, R.N.
Nursing Supervisor
Lois Cramb, R.N.
Laboratory Technician
Alice Ackerman, A.B., M.T.
Laboratory Technician
Claire A. Reavey, A.B.
Research Technician
Helen M. Dobbin, A.B.
Pharmacist Frank V. Zito, Ph.G.
Research Librarian and Translator
Mary B. Jackson, A.B., M.A.
Special Dietitian Eleanore L. Breen
Certificate, Leslie School
Oral Hygienist Patricia A. McCabe
Chief of Medical Records Room
Toba Blassberg, B.S.
Correspondence Secretary
Ella C. Saunders
Comptroller Albert W. Stevens
Chief, Dietary Department
Helen R. Schait,
Certificate, Pratt Institute
Chief, Purchasing and Contract Department William M. Jennings
Personnel Instructor Mary Ulisse
Personnel Clerk Gertrude E. Engman
Supervisor of Food Service
Helen G. Jacobs

THE FACULTY OF INSTRUCTORS FOR GUESTS

Chairman, The Faculty of Instructors for Guests
Blake D. Prescott, B.A., M.A., M.D.
Executive Officer, The Faculty of Instructors for Guests
Charles R. Clarke, Jr., B.P.E.
Secretary M. Irene Dixon
Editor, Publication for Guests
Thomas E. Murphy, L.L.B.
Art Editor, Publication for Guests
Carolyn C. Bronson,
Art Students League of New York
Social Director Dorothy F. Carruth
Instructor, University Extension Courses
Angela T. Folsom, B.A., M.A.
Instructor, University Extension Courses
Margaret L. Adams, A.B., A.M.
Instructor, University Extension Courses Margaret F. Head, B.A.
Librarian, Guest Library
Mary E. Crehan, B.A., Ed.M.
Instructor, Horticulture
Robert F. Stevens, B.S., M.S.
Instructor, Current Events
Irwin A. Buell, B.A., M.A., Ph.D.
Instructor, Current Events
John W. Colton
Instructor, Current Events
Ward E. Duffy, B.A., B.Lit.
Instructor, Physical Education
Arthur E. Chatfield, B.S.
Instructor, Physical Education
Walter T. Herrett, B.S.
Instructor, Physical Education
Emelie E. James, B.S.
Instructor, Physical Education
Barbara Gately, B.A.
Instructor, Swimming Anne Hartridge
Instructor, Bridge
Theodosia Van Norden Emery,
Master of Bridge and Director
Culbertson National Studios
Instructor, Dancing Doris Gibbons,
Russian School of Ballet Dancing
Instructor, Painting and Modelling
Bertha White
Instructor, Sculpturing
Fraincis L. Wadsworth,
Student of a Rodin Pupil
Instructor, Painting and Drawing
Dorothy G. Spaulding,
Child-Walker School of Art
Instructor, Appreciation of Art
A. Everett Austin, Jr., B.S.
Instructor and Modiste
Doris Runshaw
Instructor, Shorthand and Commercial Courses Martha L. Blake,
Certificate, Bay Path Institute
Instructor, Arts and Crafts
Elsie M. Krause, B.A. in Art Education
Pratt Institute
Instructor, Arts and Crafts
Jean P. Harris,
Diploma, Pratt Institute
Instructor, Manual Arts
Claude D. Lacourture, B.S.
Instructor, Manual Arts
Alexander Kaszalka
Instructor, Dietetics
Helen L. Ronan,
Diploma, Pratt Institute
Instructor, Music, Organ and Piano
Venila B. Colson, A.B., A.M.
Instructor, Cello
Katherine H. Howard, Diploma,
Royal School of Music, Berlin
Instructor, Music, Vocal
Josephine S. Koch,
Yale School of Music
Instructor, Appreciation of Music
Reginald G. DeVaux, B.A., M.A.,
from Royal Conservatory of St.
Cecelia, Rome, and A.G.N., N.A.O.
from Pontifical School of Sacred
Music, Rome
Instructor, Violin
Lorraine Martineau, B.M.,
Eastman School of Music
of University of Rochester
Instructor, Braille
Ethel M. Law, B.Ed.
Instructor, Lip Reading
Eveline Dunbar, Certificate,
Clark School Training
Class for Teachers
Instructor, Beauty Culture
Ruth H. Ulrich, Certificate,
Schulz Training School
Instructor, Beauty Culture
Dorothy L. Allen, Certificate,
Schulz Training School
Personal Shopper
Elizabeth Stephenson, B.A.
Chief Physiotherapist
Charles C. Canivan, R.N., P.T.
Physiotherapist
Ruth E. Manion, R.N., P.T.
Physiotherapist
William E. Groff, R.N.
Physiotherapist
Virginia M. Smith, R.N.
Orchestras:
Institute's Chamber Music Orchestra
White's Cavaliers
Jones' Music Masters

THE NEURO-PSYCHIATRIC INSTITUTE OF THE HARTFORD RETREAT

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THE BUSINESS SIDE OF MEDICINE

A STUDY OF INCOMES AND EXPENSES FOR 1939

By HENRY C. BLACK and ALLISON E. SKAGGS

After the publication in 1937† of average income and expense figures which we had compiled through the courtesy of fifty of our clients throughout the State of Michigan, a great number of doctors, including many young men just starting in practice, made these figures a basis for comparison with their own experiences. The enthusiastic reception of these figures and the many requests for additional information from doctors who were not clients of ours has made us keenly interested in accumulating still further information for the benefit of the Profession, and we are now presenting a brief summary of the results of our compilation made from available 1939 figures of a still larger and more varied group of doctors.

We do not suggest that the accompanying figures are those of the average doctor. They are, however, the average of the seventy-nine doctors whose figures were available to us, and were used by us for this purpose because we felt that they represented an excellent cross-section of medical practice in Michigan communities ranging from the rural sections to the large cities. These averages represent figures from individuals and two-man partnerships, but none from the larger group practices.

		Average Yearly Total	*Average Per Income Dollar*
Business Done		$12,406.91	..
Cash Received		10,954.10	$1.00
Expenses:			
Rent	$ 630.87		.06
Drugs and Supplies	1,166.51		.11
Salaries	1,115.75		.10
Fees	377.80		.03
Automobile Expense*	589.59		.05
Miscellaneous Expense**	935.95		.09
Total Expense		$ 4,816.47	$ .44
Net Profit		$ 6,137.63	.56
Living Expenses		$ 4,232.63	.38
Life Insurance Premiums		879.45	.08
Net Gain		$ 1,025.55	.10

*Including Depreciation.
**All other expenses including Depreciation on equipment, furniture, and instruments.

Why not get out your own figures for the year 1939, and see how they compare either in dollars and cents or in percentages with averages shown in this study?

In such a study of income and expense figures, it will be apparent that these net incomes are higher than is usually conceded to be the average net income for doctors. Our clients represent a higher income group than could be considered average, and our very employment by them is evidence of their desire to handle their business most effectively. It also must be apparent that the average collection experience of these doctors is high, amounting to over 88 per cent for all groups, including rural practices. We believe these high collection percentages confirm the soundness of our recommendations made in previous articles in this JOURNAL regarding the necessity of good office records, prompt and regular sending of statements on all accounts, and the correct psychological approach through correspondence to delinquent accounts, as adherence to these fundamental principles makes for a higher financial return.

It should also be interesting to know that the average net worth of the seventy-nine doctors in this study was slightly over $10,000.00 each, or about one year's cash income. The average original cost of office furniture, instruments, and equipment now in use was approximately $2,500.00, and the cash on hand, including bank deposits, amounted to slightly over $1,000.00.

In the accompanying table showing expense in terms of percentages, we have classified these doctors into four general groups:

A. Those practicing in small towns.

B. General practices in cities of 25,000 or larger.

†JOURNAL of the Michigan State Medical Society, August, 1937.

TABLE OF EXPENSES IN RELATION TO INCOME

	Group A	Group B	Group C	Group D
Cash Income	$1.00	$1.00	$1.00	$1.00
Expenses:				
Rent	.05	.06	.08	.06
Drugs and Supplies	.15	.10	.07	.08
Salaries	.09	.09	.09	.13
Fees	.05	.03	.01	.04
Automobile Expense*	.06	.06	.06	.04
Miscellaneous Expense**	.07	.10	.09	.08
Total Expense	.47	.44	.40	.43
Net Income	$ .53	$ .56	$ .60	$ .57
Living Expenses	.35	.43	.37	***
Life Insurance Premiums	.09	.08	.09	***
Net Gain	$ .09	$ .05	$ .14	***

*Including Depreciation.
**All other expenses including Depreciation on equipment, furniture, and instruments.
***Not available.

C. Specialty practices (all of which are in larger cities).

D. Partnerships of two doctors.

In the first expense classification, although rent in individual cases varies considerably, it will be noted that the *average* office rent varies but little in the four groups, ranging from 5 per cent in those practices in small towns to 8 per cent for the specialty practices. Drugs and supplies run higher in rural communities due to the fact that more dispensing is done in that type of practice than in the large city practices, and particularly higher than is true in the specialty practices.

Average salaries amount to the same for the small town general practice and specialty practice, but increase substantially in partnerships due to the fact that there is usually another office girl or nurse employed over and above the average number employed by doctors practicing alone. We might mention, however, that although this addition to the pay roll increases the salary ratio, it invariably adds materially to the volume of business the doctors are able to do.

Fees vary from 1 per cent in specialty practices to 5 per cent in small towns. Automobile expense remains the same in the first three groups, but is lower in partnerships probably due to the fact that most partners draw a fixed car allowance which may not quite cover their entire car expense.

Miscellaneous expenses, which include all other expenses directly chargeable to the business as well as depreciation on the physical assets of the office, fluctuate from 8 to 10 per cent, and for a general classification such as this, this variation is small indeed.

Living expenses average from 60 to 75 per cent of the net incomes (30 to 40 per cent of cash receipts), and life insurance premiums average from 15 to 20 per cent of the net incomes (7 to 10 per cent of cash receipts).

In spite of the fact that the practice of medicine must never be regimented; in spite of the fact that its ethics must continue to remain higher than any other profession; in spite of the fact that studies of costs and volume must necessarily be foreign, and possibly even uninteresting to some doctors, such tables of comparison as this can be made very valuable in determining whether your office is producing the maximum return.

Such a table should tell you whether you have retained a sound perspective in your composite judgment of the proper expenditures for salaries, rent, other expenses, and investment in equipment, provided you will really take time to schedule out your own expenses in the same form as those listed here, and see where they are higher or where they are lower.

Try to find where any variances are reflected in your net income and financial progress. If enough doctors do this we will feel very well compensated for the time and effort that we have spent in compiling these figures to present to the Profession in Michigan some sort of "yardstick" by which they may measure their own achievements.

MICHIGAN MEDICAL SERVICE

Steady consistent growth during the first months of operation is recorded by Michigan Medical Service. It is increasingly important that every doctor knows the provisions of this plan sponsored by the medical profession to make possible a sound pre-payment arrangement for medical services. Attention is invited to the results of the operation of a professionally administered medical service plan.

Enrollment

As of July 31, 66,982 persons were enrolled, including employees and in most instances their dependents, of the following leading Michigan firms:

Acme White Lead & Color Works; Almont Manufacturing Co.; *Ann Arbor News; Bay City Times;* Booth Newspapers; Cavin Lumber Yards; Champion Spark Plug; Chases' Department Store; City of Royal Oak; Cogsdill Manufacturing Co.; College Drug Store; Dean & Harris; Edison Institute; Federal Mogul Corp.; Ford Motor Company; Freeman Manufacturing Co.; J. J. Gielow & Sons; *Grand Rapids Press;* Henry Ford Trade School; Holden & Reaume; Hurd & Lock Manufacturing Co.; *Jackson Citizen Patriot; Kalamazoo Gazette;* Lewis F. Brown, Inc.; Lonergan Manufacturing Co.; Manufacturers' Life Insurance Co.; Michigan State Board of Tax Administration; Michigan State Highway Department; Michigan State Unemployment Compensation Commission; *Muskegon Chronicle;* J. C. Penny Co.; People's Outfitting Co.; *Saginaw Daily News;* Stewart Hartshorn Co.; Department of Public Instruction; Symons Bros. Co., Jackson and Saginaw; Truckaway Corporation; United Detroit Theatres; Versnick Bros. Co.; Washington Boulevard Building.

A steady increase in enrollment of an average of 1,700 new subscribers each month has been obtained during the summer months. The recognition of Michigan Medical Service and the presentation during the fall months when employees are back from vacations will make possible even greater monthly enrollment.

State-Wide Organization

Michigan Medical Service is enrolling subscribers throughout the entire state. Doctors in practically every locality may have patients who are subscribers. Particular attention is being given to enrollment in *rural areas.* Arrangements are being completed for the enrollment of rural mail carriers through the Michigan Rural Mail Carriers Association. Steps are being taken to enroll other rural groups through common interest organizations such as the Michigan State Grange and other associations.

Nine district offices have been established in coöperation with Michigan Hospital Service (formerly the Michigan Society for Group Hospitalization). Sixteen representatives are presenting the Medical Service Plan (or the Surgical Benefit Plan) and the Hospital Service Plan to groups of eligible subscribers anywhere in the state.

Individual doctors are urged to refer all inquiries concerning the possible enrollment of groups of subscribers in their community to

MICHIGAN MEDICAL SERVICE
REGISTRATION HONOR ROLL

(As of August 10, 1940)

100 per cent

Barry
Mason

90 to 99 per cent

Manistee

80 to 89 per cent

Allegan
Bay-Arenac-Iosco-Gladwin
Chippewa-Mackinac
Calhoun
Clinton
Delta-Schoolcraft
Dickinson-Iron
Gratiot-Isabella-Clare
Hillsdale
Ingham
Kent
Lenawee
Mecosta-Osceola
Menominee
Midland
Monroe
Newaygo
Oceana
Ontonagon
Saginaw
St. Joseph
Tuscola

75 to 79 per cent

Eaton
Lapeer
Muskegon
Northern Michigan
O. M. C. O. R. O.
Ottawa

the local representative or directly to Michigan Medical Service, 2002 Washington Blvd. Bldg., Detroit.

Services to Patients

Real assistance to subscribers obtaining medical services has been made possible. Services have been received by 3,000 patients under both the Medical Service Plan and the Surgical Benefit Plan.

Doctors of medicine are rendering services to patients who are subscribers of Michigan Medical Service at the rate of twenty patients each day.

Payments to Doctors

Services provided subscribers during the first six months by participating doctors of medicine was in excess of $100,000.00.

At least one out of every nine doctors of medicine in Michigan has been paid, through Michigan Medical Service, for services to subscribers. Doctors in fifty-seven out of the eighty-three counties in the state have received payments for services.

In each month the full Schedule of Benefits, equivalent to prevailing charges now made by doctors of medicine in Michigan for patients in the income group enrolled in Michigan Medical Service, has been paid for all services.

The Michigan State Medical Society has not contributed to M.M.S. since it enrolled its first group (March 1, 1940).

Procedure for Payments

There is only a minimum of paper work for physicians to receive payments through Michigan Medical Service for services to subscribers.

When a subscriber requests services, the doctor sends a short Initial Service Report to verify that the subscriber is in good standing and eligible for services. The correct spelling of the patient's name and the certificate number from the subscriber's Identification Card or Certificate will facilitate the handling of reports. The doctor will be notified by return mail or by telephone **if the subscriber is not eligible for benefits.**

The Monthly Service Report, to be sent at the completion of services *but not later than the end of each month,* is an itemized statement of services rendered. To avoid delay in the approval of your bill, fill in all information requested. The Medical Advisory Board will be assisted greatly if the doctor sending in the report will indicate the amount of special service such as the extent of lacerations sutured, the location and size of tumors or cysts removed, the particular type of operation performed (Strumdorf, Baldy-Webster, Caldwell-Luc) and the kind of x-ray (chest, stereoscopic).

For additional report blanks, write M.M.S. or call upon your County Society Secretary who has a supply.

More than 3,200 doctors of medicine, or three-fourths of the total possible number, are registered with Michigan Medical Service.

You Are Cordially Invited

When you attend the Annual Meeting of the Michigan State Medical Society in Detroit, September 25-28, you are invited to visit the offices of Michigan Medical Service on the 20th floor of the Washington Boulevard Building—one short half block from the Convention Headquarters in the Book-Cadillac Hotel.

At the Convention, stop in Booth No. 68, a joint exhibit of the Medical and Hospital service plans. Full information about all aspects of both Michigan Medical Service and Michigan Hospital Service can be obtained. Detailed experience reports will be available and attendants will be able to furnish you with the data you may desire.

YOUR PREPAREDNESS QUESTIONNAIRE

Have you executed and mailed your Preparedness Questionnaire to the American Medical Association, 535 North Dearborn Street, Chicago? Michigan's returns run only 47 per cent —well under the average for the whole country. Send in your questionnaire at once, and help boost this state's percentage of returns to 100 per cent.

YOU AND YOUR BUSINESS

THE DIAMOND JUBILEE of the Michigan State Medical Society is at hand! Plan to be in Detroit, September 25, 26, 27. Notify your patients that you are taking advantage of this unusual postgraduate opportunity. Advise the editor of your newspaper that you will be in Detroit for the 75th Annual Meeting of the State Society.

REMEMBER THE DATES
SEPTEMBER 25, 26, 27, 1940
BOOK-CADILLAC HOTEL, DETROIT

BRING YOUR MEMBERSHIP CARD. To facilitate your registration, the registrars would appreciate your presenting your M.S.M.S. Membership Card when you visit Detroit for the Diamond Jubilee. A registration of approximately 2,000 physician-members is anticipated, so presentation of your Membership Card will add to your convenience. Register on the 5th floor, Book-Cadillac Hotel.

In the General Assemblies, the Section Meetings, and the Technical Exhibits, every phase of Medicine and Surgery will be covered—the last word in modern, practical, scientific medicine and surgery.

Regardless of what any physician may be interested in, regardless of how general or how limited his interest, there will be at Detroit a program to challenge that interest and make it worthwhile for him to attend.

INVITATIONAL GOLF. An invitational golf match, to which all members of the Michigan State Medical Society are cordially invited, will be held at 1:00 p. m. on Monday, September 23, 1940, at Detroit Golf Club. Greens fees and dinner, $4.00.

THE TECHNICAL EXHIBITION. An educational exhibit of unusual interest and scope has been arranged on the Fourth Floor of the Book-Cadillac Hotel for the M.S.M.S. Diamond Jubilee. The exhibition will be open every day from 8:30 a. m. to 6:00 p. m. (close at 3:00 p. m. on Friday).

FIRST ANNUAL MEETING, Michigan Medical Service. The members of Michigan Medical Service will meet on Monday, September 23, 1940, at 8:00 p. m. in the English Room, Book-Cadillac Hotel, Detroit. Members of Michigan Medical Service are all the members of the Michigan State Medical Society's House of Delegates plus the Directors of Michigan Medical Service. The officers' reports and election of directors will be on the agenda of the first annual meeting.

NEGLECTED AND FORGOTTEN

The best information obtainable backs up a statement in the last issue of THE JOURNAL OF THE MICHIGAN STATE MEDICAL ASSOCIATION that 937 crippled children who should have received hospital treatment last year were deprived of it because of the severe cut the Legislature made in the fund for the care of such unfortunates.

That is not a pretty fact; and the one excuse for the Legislature is lack of intent. The members of that body in trying to end one abuse unwittingly created another. In an effort to stop a reckless expenditure of funds which in some places was approaching the proportions of a racket, they placed the child relief effort in a straightjacket.

The circumstances are well known, and need not be elaborated. It also is true that the Legislature can do nothing to correct its mistake until it convenes again.

But there is one body that could have done something and didn't. This is the so-called Little Legislature, which has an emergency fund at its command, and also some power over the distribution of unexpected State assets.

The Little Legislature, faced with an opportunity to assign millions where need was greatest, developed great liberality in directions where it was relatively mild, or did not actually exist at all. It even delivered handouts to fairs and conventions. But, so far as we know, the crippled children were overlooked.

It is true that in the beginning the seriousness of their plight was not well understood. But in recent months there has been no doubt about the real suffering the over-curtailment of the

(Continued on page 704)

State appropriation has caused. How much the Little Legislature might now do, we cannot say; but the members should bestir themselves and help as far as they can.

—*Detroit Free Press,* Editorial, July 25, 1940.

YOU ARE RESPONSIBLE

Under the Harrison Narcotic Act, when a nurse handles narcotics for a physician, she acts as his agent. Inherently she has no right either to possess or administer narcotics; unless, of course, they lawfully belong to her or someone else for whom she may lawfully act as an agent. —From *Medical Jurisprudence,* by Carl Scheffel, Ph.B., M.D., LL.B., P. Blakiston's Son & Co., 1931.

INTRAMURAL COURSES

■ Norman R. Kretzschmar, M.D., of the University of Michigan, has furnished these remarks relative to postgraduate medical education:

Extramural courses have been a great success, but short concentrated courses designed to meet the needs of particular individuals and sufficiently flexible to provide a variety of material with the simultaneous presentation of clinical material would be a distinct advance in postgraduate medical education.

Such a program for teaching obstetrics was established in 1938. Arrangements were made for four physicians at a time to spend two weeks at the University Hospital in Ann Arbor. The physicians eat at very reasonable rates at the hospital cafeteria, and pay $3.00 a week for room at the hospital.

Since their accommodations are in the Maternity Unit, the men have intimate contact with the routine of the department and they take part in the management of the obstetric patients. Instructors are provided to review as completely as necessary the fundamentals of obstetrics and to discuss clinical problems as they arrive. Newer principles in the handling of various problems complicating obstetrics, such as toxemia, hemorrhage, heart disease, diabetes, et cetera, receive particular attention.

The program in addition includes a consideration of problems in pediatrics, surgery and other specialties. The men also attend the various conferences in the department for the discussion of endocrinology and obstetric and gynecologic pathology.

Since its inception the plan has provided this training for approximately one hundred men from all parts of the state. It has been received with great enthusiasm by all who have attended.

These two-week periods of postgraduate training continue to be open to physicians of the state. Arrangements should be made through the Bureau of Maternal and Child Health of the Michigan Department of Health. Physicians wishing to attend are asked to suggest the time most suitable for them so that their practice will be disturbed as little as possible.

It is hoped that the response of physicians and continued coöperation of the State Health Department and the University will extend and widen the scope of this program. Every physician in the state should have the opportunity to take this training.

POSTGRADUATE EDUCATION

In the August number of THE JOURNAL is found a notice of centers and dates of the Autumn Postgraduate Series sponsored by The Michigan State Medical Society in coöperation with the University of Michigan Medical School, Wayne University College of Medicine and the Michigan Department of Health. The subject matter is as follows:

October, 1940

1. *The Newborn Period.* Diseases peculiar to this period. Hemorrhagic diseases. Use of Vitamin K. Icterus neonatorum. Tetany. Convulsions. Thymic enlargement.

2. *The Management of Labor.* The use and abuse of analgesias in obstetrics.

3. *Development of Hernia.* The care of hernia in infants and children. Medico-legal aspects. The complications: Inflammation, irreducibility, incarceration, strangulation. Adult cases manageable by truss. Injection treatment. Selection of operative procedures. The problem of the recurrent hernia.

4. *The Significance of Albuminuria.* Finding the cause of albuminuria. A simple classification of nephritis. A practical and highly accurate renal function test. The etiology and management of nephritis. Preventive aspects of glomerular nephritis. Nephrosis. Albuminuria of pregnancy.

5. *The Psychoneuroses;* their cause, classification and methods of treatment suitable for office practice.

6. *Laboratory Procedures for Office Practice.* A demonstration and interpretation of certain laboratory tests useful in daily office practice with minimum of time and equipment.

7. *Nasal Accessory Sinus Diseases in the Practice of Medicine.* The diagnosis and treatment of acute and chronic sinusitis.

8. *The Differential Diagnosis of Coma.* The more practical points in the clinical and laboratory diagnosis of this emergency. The available treatment of the various types.

MICHIGAN'S DEPARTMENT OF HEALTH

HENRY A. MOYER, M.D., Commissioner, Lansing, Michigan

LESS CONTAGION

A sharp drop in the prevalence of communicable diseases throughout the state is indicated in the reports received by the Michigan Department of Health during the first six months of 1940.

Cases of all major diseases declined from 38,914 during the first half of 1939 to 37,957 cases for the same period this year. Important reductions were noted for all communicable diseases except measles, poliomyelitis and gonorrhea.

Pneumonia cases declined 31 per cent from 2,696 cases last year to 1,853 in 1940. Whooping cough cases dropped from 5,170 to 4,032. Diphtheria cases totaled 114 compared to 273 last year. Tuberculosis, smallpox and syphilis cases also dropped below 1939 figures.

Measles cases increased from 8,946 cases in 1939 to 12,167 cases so far this year. It is expected that measles cases will continue to increase during the coming year as this disease approaches the peak of its usual three-year cycle.

POLIOMYELITIS

There were 26 cases of poliomyelitis reported in July this year, compared with 82 in 1939 when the state's second largest outbreak of the disease occurred. The five-year mean for the month is 27 cases.

The cases this year have been widely scattered throughout the state, with little concentration in any single area thus far. Wayne County, where a majority of the 1939 cases occurred, is reporting few cases this year. If the relatively low incidence of poliomyelitis occurring in July continues, health officials do not expect that the disease will approach the epidemic proportions of last year.

TORONTO SPLINTS AND BRADFORD FRAMES

Toronto splints and Bradford frames designed for use in poliomyelitis outbreaks are being made available by the National Foundation for Infantile Paralysis. These appliances will be provided on a loan basis in any community for use with indigent patients who may be in need of them. Requests for loan of these appliances will be made through the county chapters of the National Foundation. A leaflet describing the splints and frames, their method of use and the manner of ordering them may be obtained upon request to the local chapter or to the Foundation at 120 Broadway, New York City.

A.P.H.A. MEETING IN DETROIT

The American Public Health Association will come to Michigan this year to hold its 69th annual meeting October 8-11 in Detroit. The Michigan Public Health Association is acting as host to the national meeting. No Michigan Public Health Conference will be sponsored this year.

Affiliated organizations meeting in conjunction with the American Public Health Association will include the American School Health Association, National Organization of Public Health Nursing, International Society of Medical Health Officers, and a number of other groups.

Henry F. Vaughan, Dr.P.H., Detroit health commissioner, is acting as executive secretary of the Michigan Committee in charge of arrangements for the annual meeting. Headquarters for the meeting will be at hotels Book-Cadillac and Statler. All representatives of the health professions in Michigan have been cordially invited to attend the sessions of the A.P.H.A. This will be the first time this organization has convened in Michigan in sixteen years.

DARKFIELD EXAMINATIONS

The darkfield examination is rapidly becoming one of the methods most used by Michigan physicians for the diagnosis of early syphilis. The delayed darkfield by the use of the capillary tube has proved most satisfactory. To achieve the best results, the capillary tube should be filled at least half full of the specimen material. Both ends of the tube should be filled with wax to prevent leakage. The most satisfactory results will be obtained if three or four specimens are taken on succeeding days, each specimen being mailed to the laboratory the day it is taken. Laboratory kits for taking darkfield specimens may be obtained upon request to local full-time health departments or the laboratories of the Michigan Department of Health.

LABORATORY TESTS INCREASE

Michigan physicians are making greater use than ever before of the services offered by the laboratories of the Michigan Department of Health. Demands upon the laboratories in April set an all-time monthly high of 52,280 examinations. In June 47,377 examinations were made, an increase of 6 per cent over the same period last year. The two state laboratories in the Upper Peninsula at Houghton and Powers are each doing more examinations than one laboratory alone did two years ago. Both the Houghton and Powers laboratories are doing more than 4,000 examinations each month for Upper Peninsula physicians. The Department also maintains a Western Michigan Division Laboratory at Grand Rapids in addition to the central laboratory at Lansing.

TUBERCULOSIS MORTALITY

Tuberculosis mortality for 1939 continued to equal the record low rate established the previous year. Deaths from tuberculosis in Michigan totaled 1,881 in 1939 with a rate of 36.9 deaths per 100,000 population. In 1938, 1,866 deaths were reported for a rate of 36.6. Of the 1,881 deaths last year, 945 occurred in Detroit.

PERSONNEL CHANGES

Dr. Jacques Pierce Gray has been appointed director of the Hillsdale County Health Department with headquarters at Hillsdale. Dr. Gray comes to Michigan from California where he had been serving as director of public welfare of the city and county of San Francisco.

Dr. Richard Sears, director of the District Health Department No. 5 with headquarters at White Cloud, was appointed director of the Muskegon County Health Department, effective August 1.

Dr. J. A. Wessinger was officially appointed full time health officer for Ann Arbor, effective June 3, 1940. Dr. Wessinger had served for many years in a similar part time capacity.

Dr. R. E. Pleune, director of the Houghton-Keweenaw Health Department, has announced that the headquarters for his department has been changed from Houghton to Hancock.

On July 1, 1940, Benzie County joined with the Mason-Manistee Health Department to form the new Mason-Manistee-Benzie District Health Department. Dr. Frank J. Hill will continue as director of the enlarged department with headquarters at Manistee.

COUNTY AND PERSONAL ACTIVITIES

Frank H. Power, M.D., Ann Arbor, Field Representative in Cancer of the State Society, addressed the Women's Congress of the Calhoun County Fair at Marshall on August 22, 1940.

* * *

Notice: If a representative of the Nation's Credit Syndicate, 343 South Dearborn Street, Chicago, contacts a physician to aid in the collection of delinquent accounts, write the American Medical Association, 535 North Dearborn Street, Chicago, for report on this firm.

* * *

Special Membership: County Medical Societies wishing to nominate members for Emeritus, Honorary or Retired Membership in the Michigan State Medical Society, at the meeting of the House of Delegates in Detroit, on September 24, 1940, are requested to notify the Executive Office, 2020 Olds Tower, Lansing, so that the eligibility of the nominee may be verified in advance of the meeting.

"Michigan Hospital Service" is the new name of the Michigan Society for Group Hospitalization. The new name, approved by the Michigan Insurance Department, will be more easily remembered in its shortened form. Michigan Hospital Service is the only group hospitalization plan operating in Michigan which has the approval of the Michigan State Medical Society.

The American Academy of Ophthalmology and Otolaryngology will hold its 45th annual convention in Cleveland, October 6 to 11. The Academy is composed of more than 2,500 specialists in diseases of the eye, ear, nose and throat. More than 100 teaching lectures will be offered this year in the elaborate program designed to bring the members up to date in their chosen fields.

Frank Brawley, M.D., Chicago, is president; Frank R. Spencer, M.D., Boulder, Colo., president-elect; Arthur W. Proetz, M.D., St. Louis, Joseph F. Duane, M.D., Peoria, Ill., and Charles T. Porter, M.D., Boston, are vice presidents. Wm. P. Wherry, M.D., Omaha, is secretary

Immediately following the annual convention of the Academy of Ophthalmology and Otolaryngology, the Pan-American Congress of Ophthalmology will bring together a large group of eye specialists of the Western Hemisphere on October 11 and 12. This will be the First Pan-American Congress, and it will be sponsored by the American Academy of Ophthalmology and Otolaryngology.

* * *

Midland County.—The Midland County physicians' wives have recently organized a County Woman's Auxiliary with a membership of fourteen. We will be ready to start activities in September and hope to be of real service to our local medical organization. The following officers were elected: President, Mrs. Kalmon S. Von Haitinger; vice president, Mrs. Melvin H. Pike; secretary-treasurer, Mrs. H. H. Gay, all of Midland.

At the Annual Meeting of the Michigan Association of Industrial Physicians and Surgeons in Detroit, Tuesday, September 24, 1940, the following program will be presented:

9:00 a.m.

Harper Amphitheater, Harper Hospital

Operative Clinic—Traumatic and Reconstructive Surgery by members of Department of Industrial Surgery.

12:00 m.

Luncheon—Hospital Cafeteria

2:00 p.m.

Round Table Discussion on Industrial Medical and Surgical Problems. Discussion to be participated in by all present and led by the following:

Carey P. McCord, M.D.
John E. Caldwell, M.D.
Francis Macmillan, M.D.
Clarence D. Selby, M.D.
Grover C. Penberthy, M.D.
Robert H. Denham, M.D.
Earl I. Carr, M.D.
John J. Prendergast, M.D.
L. E. Severy, M.D.
A. H. Whittaker, M.D.

6:30 p.m.

Dinner at the Book-Cadillac Hotel

Frank T. McCormick, M.D., Detroit, President of the Michigan Association of Industrial Physicians and Surgeons, presiding

Address: "The Part the Medical Profession Can Play in Industrial and National Defense"
by HARVEY CAMPBELL, Vice President of the Detroit Board of Commerce.

* * *

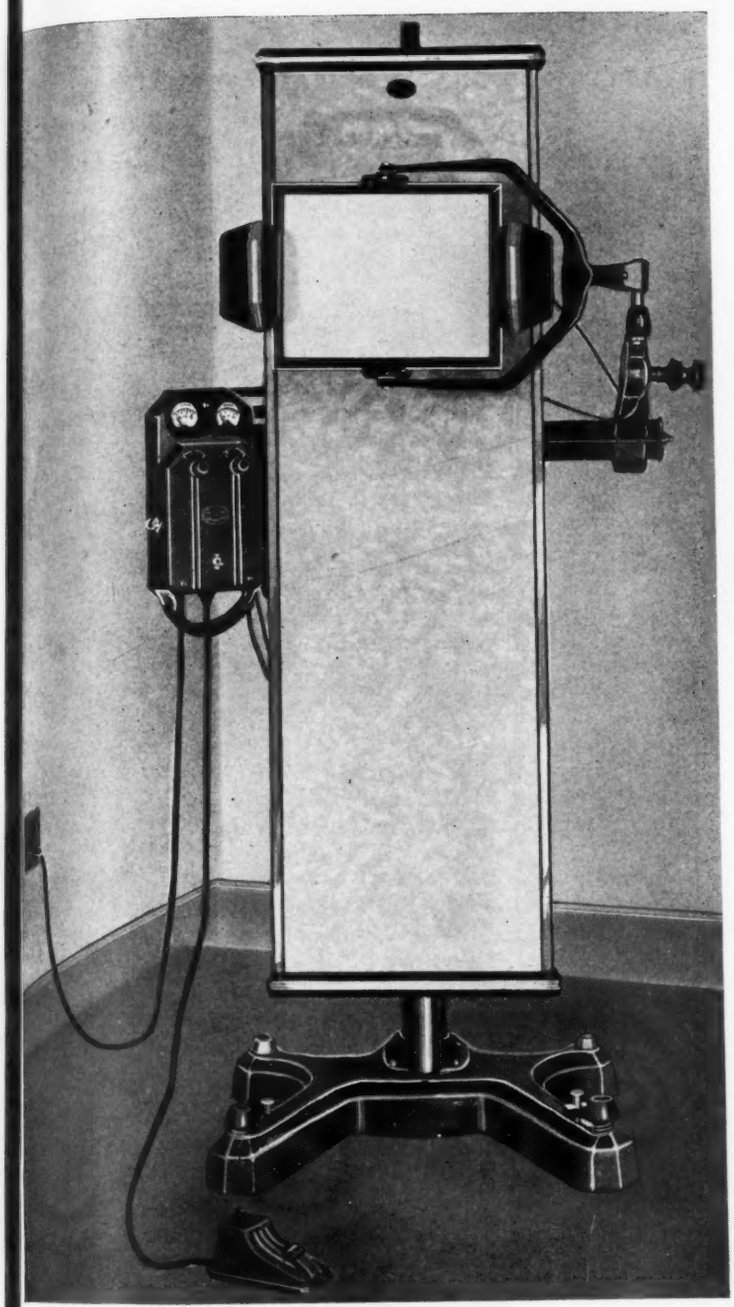
M-Day Plan—Burton R. Corbus, M.D., of Grand Rapids has been appointed as Michigan State Chairman to the A.M.A. Committee on Medical Preparedness. The balance of the Michigan committee includes:

Frederick G. Buesser, M.D., Detroit; L. Fernald Foster, M.D., Bay City; Herman H. Riecker, M.D., Ann Arbor; Ansel B. Smith, M.D., Grand Rapids; Paul R. Urmston, M.D., Bay City.

Every county medical society will be called upon to appoint a county committee on Medical Preparedness, to coördinate its activities with the State committee. A meeting of the members of the State and County committees will be held in Detroit on the occasion of the annual convention of the Michigan State Medical Society.. Announcements of the exact hour and place of this meeting will be forwarded to all members.

The Council of the State Society has officially endorsed the principle of national preparedness and has pledged the whole-hearted coöperation of the medical profession of this state in efforts to make adequate defense a reality.

The Michigan State Medical Society stands ready to aid in preparing this nation to defend itself against forces which threaten our people and our governmental, social and economic principles.



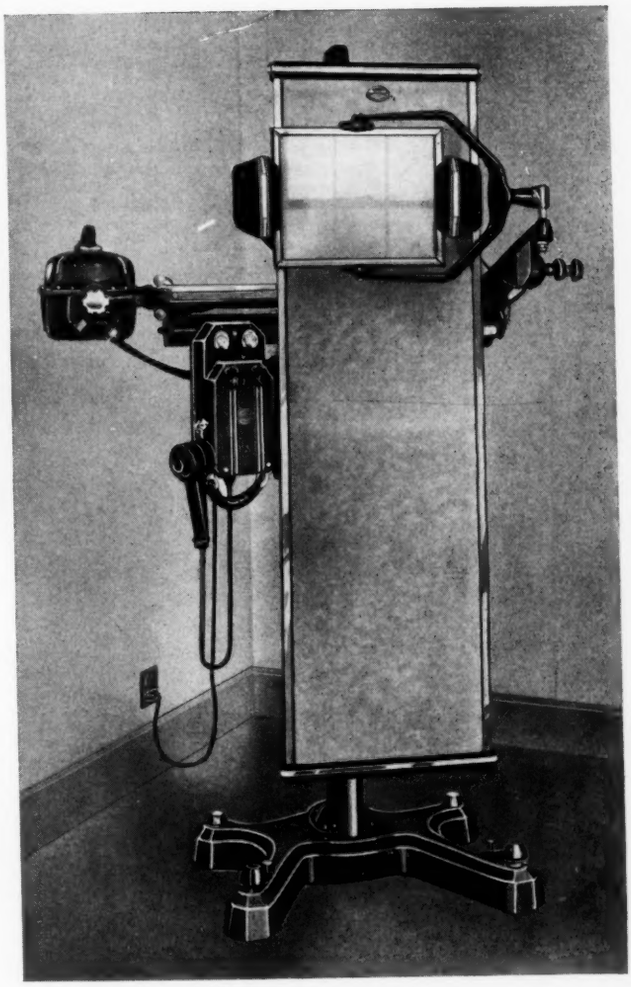
Capacity 20 Ma. - 85 KV.

TRIFLURADX

Humphreys presents the TRIFLURADX, a new design in shockproof X-ray apparatus, offering a novel departure from the conventional type of vertical fluoroscopes.

The TRIFLURADX is primarily a full range Vertical Fluoroscope, incorporating facilities for horizontal and vertical radiography, and horizontal fluoroscopy, together with the exclusive feature which allows for the removal of the X-ray Generator and Control for radiographic and fluoroscopic procedures at the patient's bedside. Adjustable telescopic legs are furnished for the latter purpose.

Full powered so that standard technique can be used.



Humphreys Roentgen Co., Aurora, Ill.

INTERNATIONAL MEDICAL ASSEMBLY

The International Medical Assembly of the Inter-State Postgraduate Medical Association of North America will be held October 14, 15, 16, 17, 18, 1940, in Cleveland, Ohio.

Pre-assembly clinics will be given Saturday, October 12; Post-assembly clinics, Saturday, October 19, in the Cleveland Hospitals.

Monday, October 14

8:00 A.M.—Diagnostic Clinics

Diagnostic Clinics: Dr. Richard B. Cattell, Boston; Dr. John Musser, New Orleans; Dr. John Alexander, Ann Arbor; Dr. George W. Thorn, Baltimore; and Dr. Loring T. Swaim, Boston.

1:00 P.M.—Diagnostic Clinics and Addresses

Diagnostic Clinics: Dr. William F. Rienhoff, Baltimore; and Dr. David P. Barr, St. Louis.

Addresses

"Postoperative Management of the Surgical Patient," Dr. Frederick A. Coller, Ann Arbor.

"Some Observations on the Nature of Acute Nephritis," Dr. John P. Peters, New Haven, Conn.

"Management of the Complications of Pregnancy," Dr. Nicholson J. Eastman, Baltimore.

"Recent Advances in Chemotherapy," Dr. Chester S. Keefer, Boston.

"Treatment of Wounds," Dr. Frederick Christopher, Evanston, Ill.

"Intestinal Absorption as a Clinical Physiological Problem," Dr. Maurice B. Visscher, Minneapolis.

7:00 P.M.—Addresses

"The Interpretation and Treatment of Spells of Unconsciousness in Medical and Surgical Practice," Dr. Soma Weiss, Boston.

"Encephalopathies in Children," Dr. Bronson Crothers, Boston.

"Surgery of Hypoglycemia with Special Reference to Resection of the Pancreas," Dr. Vernon C. David, Chicago.

"The Immediate Treatment of Head Injuries," Dr. Donald Munro, Boston.

"Management of Pelvic Inflammatory Disease," Dr. John R. Fraser, Montreal.

"Common Errors in Cardiac Diagnosis," Dr. A. Carlton Ernstene, Cleveland.

Tuesday, October 15

8:00 A.M.—Diagnostic Clinics

Diagnostic Clinics: Dr. E. Perry McCullagh, Cleveland; Dr. Henry J. Gerstenberger, Cleveland; Dr. Donald M. Glover, Cleveland; Dr. Walter G Alvarez, Rochester, Minn., and Dr. William R. Cubbins, Chicago.

1:00 P.M.—Diagnostic Clinics and Addresses

Diagnostic Clinics: Dr. Russell L. Haden, Cleveland and Dr. Waltman Walters, Rochester, Minn.

Addresses

"Medical and Surgical Aspects of the Obstructing Prostate," Dr. Hugh H. Young, Baltimore.

"Protruded Intervertebral Disc," Dr. Howard C. Naffziger, San Francisco.

"Allergic and Non-Allergic Treatment of Asthma," Dr. Warren T. Vaughan, Richmond, Va.

"Tumors of the Kidney in Children," Dr. Herman L. Kretschmer, Chicago.

"Cancer of the Stomach," Dr. Howard K. Gray, Rochester, Minn.

"Treatment and Complications of Whooping Cough," Dr. Gerald S. Shibley, Cleveland.

(Continued on page 712)

7:00 P.M.—Addresses

"The Treatment of Vesico-Colonic Fistula," Dr. Charles W. Mayo, Rochester, Minn.

"General Problems of Old Age," Dr. Lewellys F. Barker, Baltimore.

"Coronary Artery Disease," Dr. Roy W. Scott, Cleveland.

"Modern Treatment of Scoliosis," Dr. Alan deForest Smith, New York.

"The Treatment of Acute Traumatic Intracranial Hemorrhage," Dr. Eric Oldberg, Chicago.

"Successful Defibrillation of the Human Ventricles, the Establishment of a Resuscitation Squad in our Hospitals" (Motion Picture), Dr. Claude S. Beck, Cleveland.

Wednesday, October 16

8:00 A.M.—Diagnostic Clinics

Diagnostic Clinics: Dr. Raymond C. McKay, Cleveland; Dr. Thomas E. Jones, Cleveland; Dr. Italo F. Volini, Chicago; Dr. W. Wayne Babcock, Philadelphia, and Dr. Henry L. Bockus, Philadelphia.

1:00 P.M.—Diagnostic Clinics and Addresses

Diagnostic Clinics: Dr. Frank C. Knowles, Philadelphia, and Dr. James S. McLester, Birmingham.

Addresses

"Surgery of the Gall Bladder and the Bile Ducts," Dr. Roscoe R. Graham, Toronto.

"Esophagology in Relation to General Medicine," Dr. Chevalier Jackson, and Dr. Chevalier L. Jackson, Philadelphia.

"Common Errors in the Selection of Patients for Surgery," Dr. Irvin Abell, Louisville.

"Poliomyelitis, Early Diagnosis and Treatment," Dr. John A. Toomey, Cleveland.

"Endocrine Factors in Gynecological Disease," Dr. Otto H. Schwarz, St. Louis.

"The Management of the Acute Abdomen in Children," Dr. Charles H. Phifer, Chicago.

7:00 P.M.—Assembly Dinner

For members of the profession, their ladies and friends. Informal.

Dr. Chevalier Jackson, President of the Inter-State Postgraduate Medical Association of North America—Master of Ceremonies.

Addresses by:

Dr. Ross T. McIntire, Surgeon-General, United States Navy, Washington, D. C.

Dr. Nathan B. Van Etten, President, American Medical Association, New York, N. Y.

Thursday, October 17

8:00 A.M.—Diagnostic Clinics

Diagnostic Clinics: Dr. Louis Karnosh, Cleveland; Dr. W. James Gardner, Cleveland; Dr. Henry Cave, New York; Dr. Thomas Mackie, New York; Dr. Robert W. Keeton, Chicago; Dr. Claude F. Dixon, Rochester, Minn., and Dr. Russell L. Cecil, New York.

1:00 P.M.—Diagnostic Clinics and Addresses

Diagnostic Clinics: Dr. Alfred W. Adson, Rochester, Minn., and Dr. Cyrus C. Sturgis, Ann Arbor.

Addresses

"Acute Surgical Abdomen," Dr. Elliott C. Cutler, Boston.

"Infections of the Urinary Tract," Dr. William F. Braasch, Rochester, Minn.

"Malignancy of the Colon," Dr. Charles Gordon Heyd, New York.

(Continued on page 714)

"Relationship of Ophthalmology to Systemic Disease," Dr. William L. Benedict, Rochester, Minn.
"Clinical Report and Evaluation of Low Temperature in Treatment of Cancer," Dr. Temple Fay, Philadelphia.
"Choice of Anesthesia," Dr. John S. Lundy, Rochester, Minn.

7:00 P.M.—Addresses

"Treatment of the Menopause," Dr. Elmer Sevringhaus, Madison.
"Physiological and Clinical Aspects of Intubation of the Small Intestine," Dr. W. Osler Abbott, Philadelphia.
"Surgical Aspects of Gastro-Intestinal Hemorrhage," Dr. Eldridge L. Eliason, and Dr. Julian Johnson, Philadelphia.
"Treatment of Luetic Aortitis," Dr. James E. Paullin, Atlanta.
"Benign Lesions of the Neck" (slides), Dr. Robert S. Dinsmore, Cleveland.

Friday, October 18

8:00 A.M.—Diagnostic Clinics

Diagnostic Clinics: Dr. Claude E. Forkner, New York; Dr. John J. Moorhead, New York; Dr. Wallace M. Yater, Washington, D. C.; Dr. Elliott P. Joslin, Boston, and Dr. Frank H. Lahey, Boston.

1:00 P.M.—Diagnostic Clinics and Addresses

Diagnostic Clinics: Dr. George Crile, Sr. and Dr. George Crile, Jr., Cleveland, Ohio; Dr. John F. Erdmann, New York, and Dr. George R. Minot, Boston.

Addresses

"The Modern Treatment of Congestive Heart Failure," Dr. George Herrmann, Galveston.
"Pathological Lesions of the Larynx" (colored movie), Dr. Dean M. Lierle, Iowa City.
"Herniated Nucleus Pulposis; and Diagnosis," Dr. Bernard H. Nichols, Cleveland.

IN MEMORIAM

Samuel F. Haverstock, of Detroit, Michigan, was born in Butler, Indiana in 1880. Dr. Haverstock was graduated from the Detroit College of Medicine in 1909 and interned at St. Mary's Hospital. He was a member of the staff of Lincoln Hospital. He died on August 9, 1940, after practicing in Detroit thirty-two years.

* * *

Fred Wilson Lee, Fairview, Michigan, was born in Union County, Kentucky, January 16, 1876, and was graduated from Louisville Medical College, Louisville, Kentucky, in 1900 and interned at a Railroad Hospital at Paducah, Kentucky, for two years. Later he served eleven months as Captain in the Medical Corps, A.E.F. Doctor Lee was President of O.M.C.O.R.O. Medical Society at the time he died, May 28, 1940.

The value of Pyrethrum in Scabies is well established through the clinical work of Dr. S. E. Sweitzer (Scabies, further observations on its treatment with pyrethrum ointment, Journal-Lancet, (Sept.) 1936, Vol. LVI, No. 9, p. 467.) who used it on 1,213 cases at the Minneapolis General Hospital. See advertisement, page 726.

Take It and Like It

A friend claims that he went to the Governor's office on business instead of going to the Legal Advisor first and he says that it reminded him of the story of the inebriated gentleman who came staggering down from the upper deck of a two-story bus, insisting he wanted to get off because nobody was driving. He says we should elect a Governor instead of having one appointed.

Special notice to Fred Miner and Jim O'Meara: The Executive Committee of the Council held the August meeting at the Editor's cottage. *Perch was served.* Beginning at two o'clock, the meeting continued on through until exactly midnight, when the Chairman and Vice-Chairman of the Council had to motor to Grand Rapids to catch the 1:14 train on the Michigan Central. Bill Burns had intended to stay over and return in the morning but Carstens had some more business to talk over with Bill so he decided to continue his discussions while Jack Laux did the driving assisted by Andy Brunk.

Bill Burns writes, "We made the train in Grand Rapids by exactly one minute. Poor Doctor Carstens didn't get his composure back for the first hundred miles to Detroit!"

The Chairman writes, "I might add that we lost no time on the road to Grand Rapids. Twice we got off the road for about a block. To make a long story short we stepped on the train with 55 seconds to spare."

Such are the vicissitudes of a Councilor.

Friends and acquaintances of C. C. Benjamin, formerly of Detroit, should see his country estate on the Muskegon River near Bridgeton, Michigan, in Newaygo County. He entertained the Newaygo County Medical Society on August 20 with an outdoor steak roast and sweet corn dinner. He is surrounded on three sides by a trout stream, the Muskegon River and a lake so he reports that the most difficult decision to make is to decide what kind of fish he wants to have for dinner. He even has a field of wild millet as tall as ordinary sized corn. You can't call him up because he won't have a telephone on the place but you can go and call on the Squire.

WANTED—A locum tenens physician immediately for general practice at Flint, Michigan. Address replies to Michigan State Medical Society, 2020 Olds Tower, Lansing, Michigan.

THE DOCTOR'S LIBRARY

Acknowledgement of all books received will be made in this column and this will be deemed by us as a full compensation of those sending them. A selection will be made for review, as expedient.

GRADUATE MEDICAL EDUCATION. Report of the Commission on Graduate Medical Education. 1940. Composed and printed by the University of Chicago Press, Chicago, Illinois.

A TEXTBOOK OF PATHOLOGY. By W. G. MacCallum, Professor of Pathology and Bacteriology, The Johns Hopkins University, Baltimore. Seventh Edition. Thoroughly Revised. Philadelphia and London, W. B. Saunders Company, 1940. Price: $10.00.

This is the seventh edition of his standard reference book and textbook revised because of the great advances in medicine and related sciences since 1936. Dr. MacCallum here again does not attempt to dogmatically close a controversial subject but presents, in fair and impartial manner, the theories and facts as known. The illustrations are very clearly chosen and portrayed and where necessary colored plates are used. This is a reference book which should be at the hand of every practitioner of medicine.

DERMATOLOGIC THERAPY IN GENERAL PRACTICE. By Marion B. Sulzberger, M.D., Assistant Clinical Professor of Dermatology and Syphilology, Skin and Cancer Unit of the New York Post-Graduate Medical School and Hospital of Columbia University, Associate Attending Dermatologist, Monteflore Hospital, New York City. And, Jack Wolf, M.D., Attending Dermatologist and Syphilologist, Skin and Cancer Unit of the New York Post-Graduate Medical School and Hospital of Columbia University; Director of Dermatology, New York City Cancer Institute. Chicago, The Year Book Publishers, Inc., 1940. Price: $4.50.

The author has an international reputation for his fluidity of speech and writing as well as an enviable reputation as a dermatologist. He presents here the newest and most effective methods of treatment of the common skin diseases. The emphasis is entirely upon therapy but enough differential diagnosis is included to give the general practitioner a basis for treatment. The diseases are divided into fourteen large groups, which system should be an advantage in treating the conditions intelligently without having to make a fine diagnosis. The illustrations are limited to those which are of definite value in treating or diagnosing. The prescriptions are given in a flexible form to encourage the physician's individualization in handling.

SYNOPSIS OF THE PRINCIPLES OF SURGERY. By Jacob K. Berman, A.B., M.D., F.A.C.S., Assistant Professor of Surgery, Indiana University School of Medicine, Indianapolis. With 274 illustrations. St. Louis, The C. V. Mosby Company, 1940. Price: $5.00.

One of the epigrams which Berman gives his students is "a good surgeon is an internist who performs operations." The compendium well bears out the author's conception of surgery because he covers in concise form nearly every practical phase of the theory and practice of medicine and surgery. Pathology, physiology, histology, psychology, etc., are combined with practical suggestions in a usable form. It is well illustrated and clearly written.

(Continued on page 720)